

FIGURE 1A

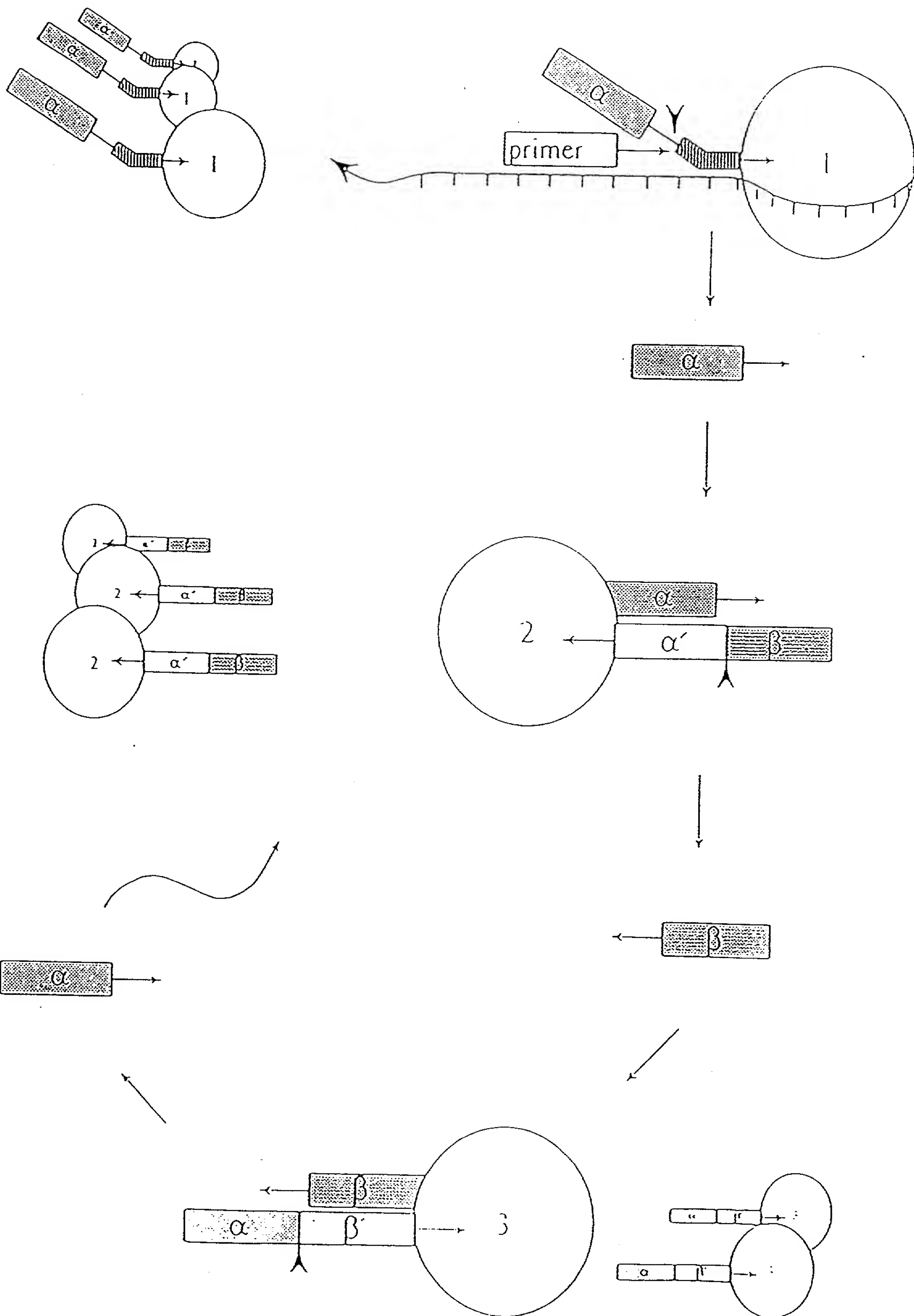
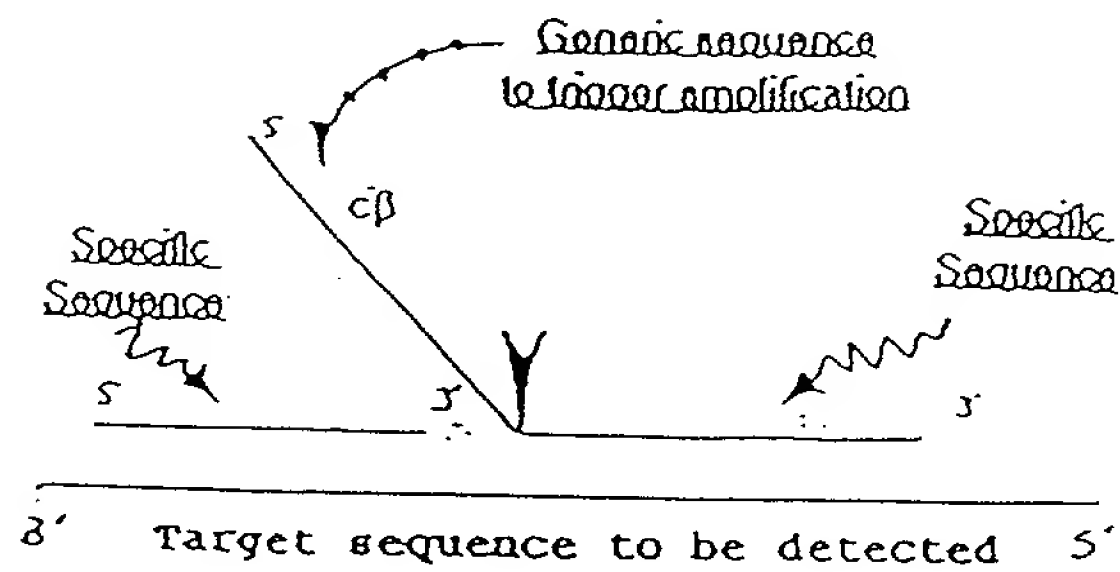


FIGURE 1B

PART ONE: TRIGGER REACTION



PART TWO: DETECTION REACTION

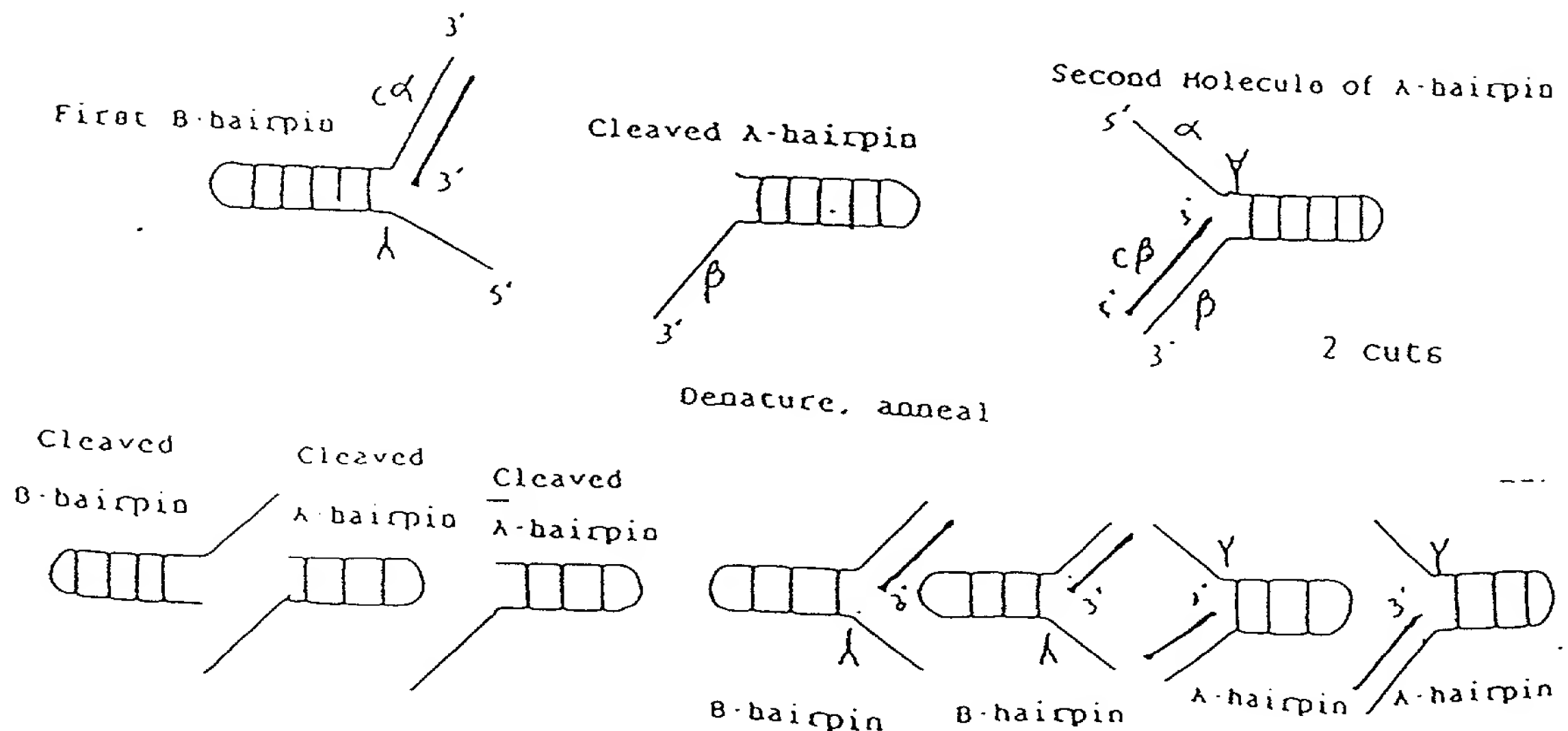
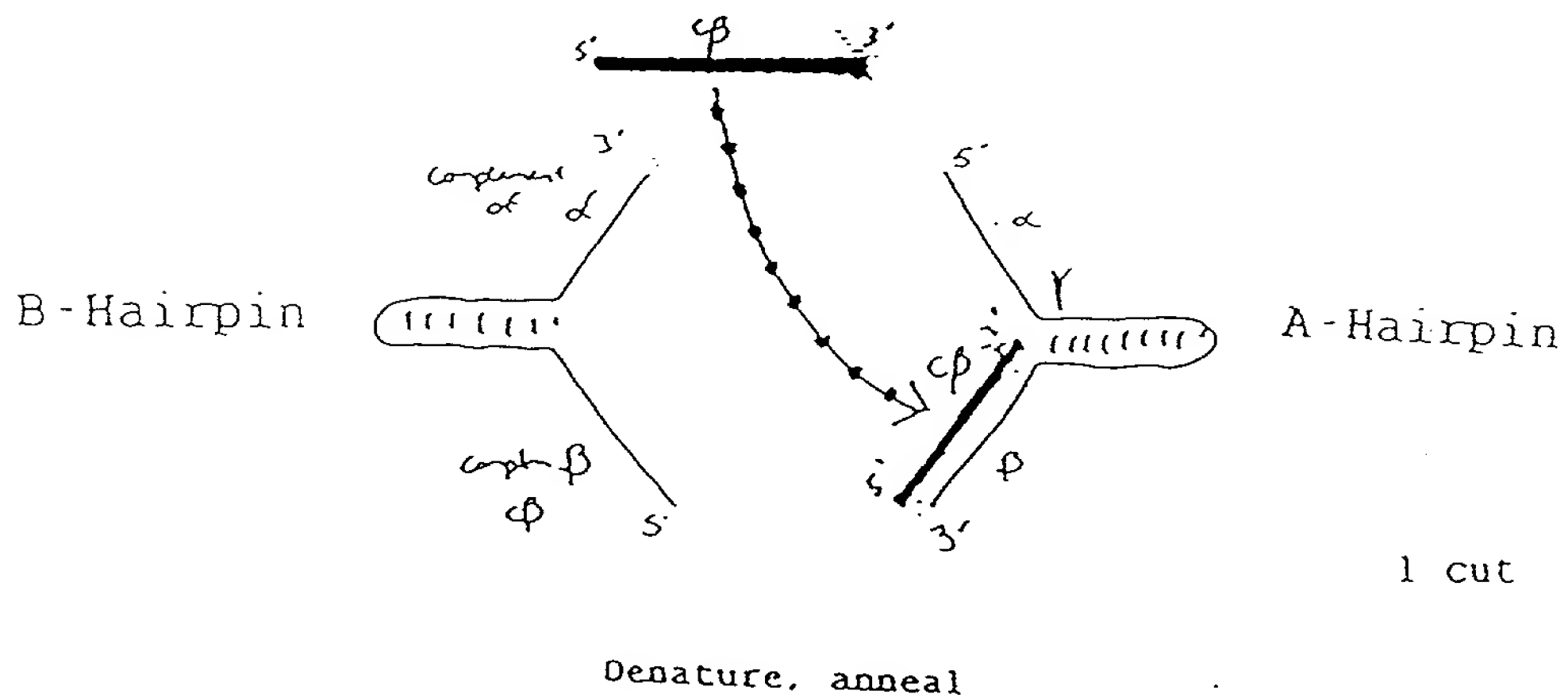


FIGURE 2 (cont'd)

| | | |
|------------------------|--|-----|
| MAJORITY (SEQ ID NO:7) | CCACCCGACGACCTXCI CCCCACCCICGCCAAGAACCCGCAACGACGCTACGACCTCCGCAICCTC | |
| ORAPTAO (SEQ ID NO:1) |C.....G.....C.....C..... | 417 |
| ORAPTR (SEQ ID NO:2) |G.....CG..... | 414 |
| ORAPTH (SEQ ID NO:3) |T.....C..... | 420 |
| MAJORITY | ACCCGACCCGACCTCTACGACCTCTCTCCGACCCGATCCGCTCTCTCCGACCCGCTACCTCA | |
| ORAPTAO |AAA.....T.....CA..... | 487 |
| ORAPTR |T.....G.....G.....A.....T.....C..... | 484 |
| ORAPTH |A.....G.....G.....G.....CC..... | 490 |
| MAJORITY | TCACCCGCGCTCCCTTTCGAGAGTACGCGCTCAGCGCGGACGACGCTCGACIACCGCGCGCTCCG | |
| ORAPTAO |C.....A.....C.....C.....CC.....A..... | 557 |
| ORAPTR |AC.....C.....C.....C..... | 554 |
| ORAPTH |A.....C.....C.....T.....C.....C..... | 560 |
| MAJORITY | CCCGACCCCTCCGACACCTCCCGCGCTCAACCGCTCCGCGGACGACGCGCGGCAACCTCTCXAC | |
| ORAPTAO |CAC.....T.....G.....CAC.....T.....CG..... | 627 |
| ORAPTR |C.....A.....G.....A.....C.....A.....CGC..... | 624 |
| ORAPTH |T.....C.....T..... | 630 |
| MAJORITY | CACI CCGCGACCCCTCCGAAACCTCTCAAGACCTCCGACCCGCTCAACCCCGC...CXI CCGCGACGACA | |
| ORAPTAO |CC.....C.....A..... | 694 |
| ORAPTR |T.....C.....A.....T.....T.....C.....C..... | 691 |
| ORAPTH |A.....A.....A.....A.....A.....C..... | 700 |

FIGURE 2 (cont'd)

| MAJORITY | (SEQ ID NO:7) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | 273 | 274 | 275 | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 327 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 |
|----------|---------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|----------|---------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

FIGURE 2 (cont'd)

| | | | |
|----------|---------------|--|------|
| MAJORITY | (SEQ ID NO:7) | CCCCGXCCTCCTCCCAAGCACCCTGCCCGCTTTCGCCCTCAGCCGCGCCCTXCACCTCXCCTCCCGCAGC | |
| ORAPTAO | (SEQ ID NO:1) |C..T....A....AG....C....A....I..C....CC....C.... | |
| ORAPTR | (SEQ ID NO:2) |AA....C....G....C....C....G....T..C....A..A.... | 1111 |
| ORAPTH | (SEQ ID NO:3) |C....C....C....C....TC....G..A....G....C....C.... | 1120 |
| MAJORITY | | ACCCCATGCTCCTCCCTACCTCCTGCAAGCCCTCCAAACACCCCGCCGCTGCCCGCCCTACCG | |
| ORAPTAO | |C....C....T....T....T....T....T....T....T....T.... | 1180 |
| ORAPTR | |G....T....T....T....T....T....T....T....T.... | 1181 |
| ORAPTH | |C....C....C....C....C....C....C....C.... | 1190 |
| MAJORITY | | CGCGGAGTGGACGGAGCAGCGCGCGCGCGCGCGCTCCTXTCGAGAGCCCTCTCCXGACCTCXXCGGAG | |
| ORAPTAO | | C....C....C....C....C....C....C....C....C....C....C.... | 125 |
| ORAPTR | |T....T....A....C....C....C....C....C....C....C.... | 125 |
| ORAPTH | |C....C....C....C....C....C....C....C....C....C.... | 126 |
| MAJORITY | | CCCCCTCAGCGCGCAGCAGCCTCCTTTCCTTACCCAGCCTCCAGACCCCTTTCGCCCGCTCCT | |
| ORAPTAO | | A..C....A....A....AC..C....C....C....C....C....C.... | 132 |
| ORAPTR | |A....A....A....C....C....C....C....C....C....C.... | 132 |
| ORAPTH | |C....A....A....A....C....C....C....C....C....C.... | 133 |
| MAJORITY | | CCACATCGACCGCCACCGCGCTXCAGCTCGACCTCGCCTACCTCCAGCCCTCTCCCTCGACCTCGCCCA | |
| ORAPTAO | |C....C....C....C....C....C....C....C....C....C.... | 135 |
| ORAPTR | |C....C....C....C....C....C....C....C....C....C.... | 139 |
| ORAPTH | |C....A....A....A....A....A....A....A....A....A.... | 140 |

FIGURE 2 (cont'd)

| MAJORITY | (SEQ ID NO:7) | CCGATCCGCGCCCTCCAGCAGGAGGTCCTCCGCGCTCCGCGCGCCGCGCCCTCAACCTCAACTCCCGCGC | 146 |
|----------|---------------|--|-----|
| ONAPTAO | (SEQ ID NO:1) | CC | 146 |
| ONAPTR | (SEQ ID NO:2) | CC | 146 |
| ONAPTH | (SEQ ID NO:3) | CC | 146 |
| MAJORITY | | CACCTCGAAAGCGTCCTCTTACCGAGCTXCGCGCTCCGCGCCATCCGCGCAAGACCGCAGACXCGCCAGCC | 153 |
| ONAPTAO | | CC | 153 |
| ONAPTR | | CC | 153 |
| ONAPTH | | CC | 154 |
| MAJORITY | | GCCTCCACCGCGCGCGCTGCTCCAGCGCGCTXCGXGAGCGCGCCACCGCCATCGCTCGACGAGATCGTCCAGTA | 160 |
| ONAPTAO | | CC | 160 |
| ONAPTR | | CC | 160 |
| ONAPTH | | CC | 161 |
| MAJORITY | | CCCGGAGCTCACCAGCTCAAGACACCTACATXGACCGCGCTCCGXGCTCGTCCACCGCCACCGCGCGC | 168 |
| ONAPTAO | | CC | 168 |
| ONAPTR | | CC | 168 |
| ONAPTH | | CC | 168 |
| MAJORITY | | CCCCCAGCGCGCTCAACCGACGCGCGCCACCGCGCCAGCGCTACGCTCCGACCGCCAGCGCTCC | 176 |
| ONAPTAO | | CC | 176 |
| ONAPTR | | CC | 176 |
| ONAPTH | | CC | 176 |

FIGURE 2 (cont'd)

| | | |
|------------------------|--|------|
| MAJORITY (SEQ ID NO:7) | ACCTTCCCAACCTTCCGCGCCCTCCATTCAAGAACCCCTCCAGCGCCGACGCGCCGCTACCTCCACA | 2184 |
| ORF1 (SEQ ID NO:1) | ..... | 2181 |
| ORF2 (SEQ ID NO:2) | A..... | 2177 |
| ORF3 (SEQ ID NO:3) | ..... |  |
| MAJORITY | CCCTCTTCCGCGCGCCCTACCTTCCGCGCCCTCAAGCGCCGCTCAAGACGCGCGCCGCGCGCA | |
| ORF1 | ..... | 2234 |
| ORF2 | ..... | 2231 |
| ORF3 | ..... | 2240 |
| MAJORITY | CGGCACTGGCCCTCAACATCGCCGCTCCAGCGCCGACCGCCGCGCCCTCATCAAGCTGGCCCACTGGCTCAAGCTC | |
| ORF1 | ..... | 2304 |
| ORF2 | ..... | 2301 |
| ORF3 | ..... | 2310 |
| MAJORITY | TTCCGCGCGCCCTXACGGAATCGCGCGCCGACGATGCTCCCTXACGCTCCAGCGCGCCGCTGGCTCCAGCGCGCC | |
| ORF1 | ..... | 2371 |
| ORF2 | ..... | 2380 |
| ORF3 | ..... |  |
| MAJORITY | CCAAACGCGCGCCGACGCGCTCGCCGCTTTCGCGCAAGCGCTCATCGAGCGCGCTCATCGCCCTCGCCCT | |
| ORF1 | ..... | 2444 |
| ORF2 | ..... | 2441 |
| ORF3 | ..... | 2450 |

CGAGGT" 3348360

FIGURE 2 (cont'd)

| | | |
|----------|---------------|---|
| MAJORITY | (SEQ ID NO:7) | CCCCCTGGAGCTCGAGCTCGCCGATCGCCGCGGCACTGGCTCTCCCCCAAGCACTAG |
| ORF1A0 | (SEQ ID NO:1) |A.....CA |
| ORF1R | (SEQ ID NO:2) |CC..... |
| ORF1H | (SEQ ID NO:3) |T.....GT... |

2499
2498
2505

760
785
770

FIGURE 4

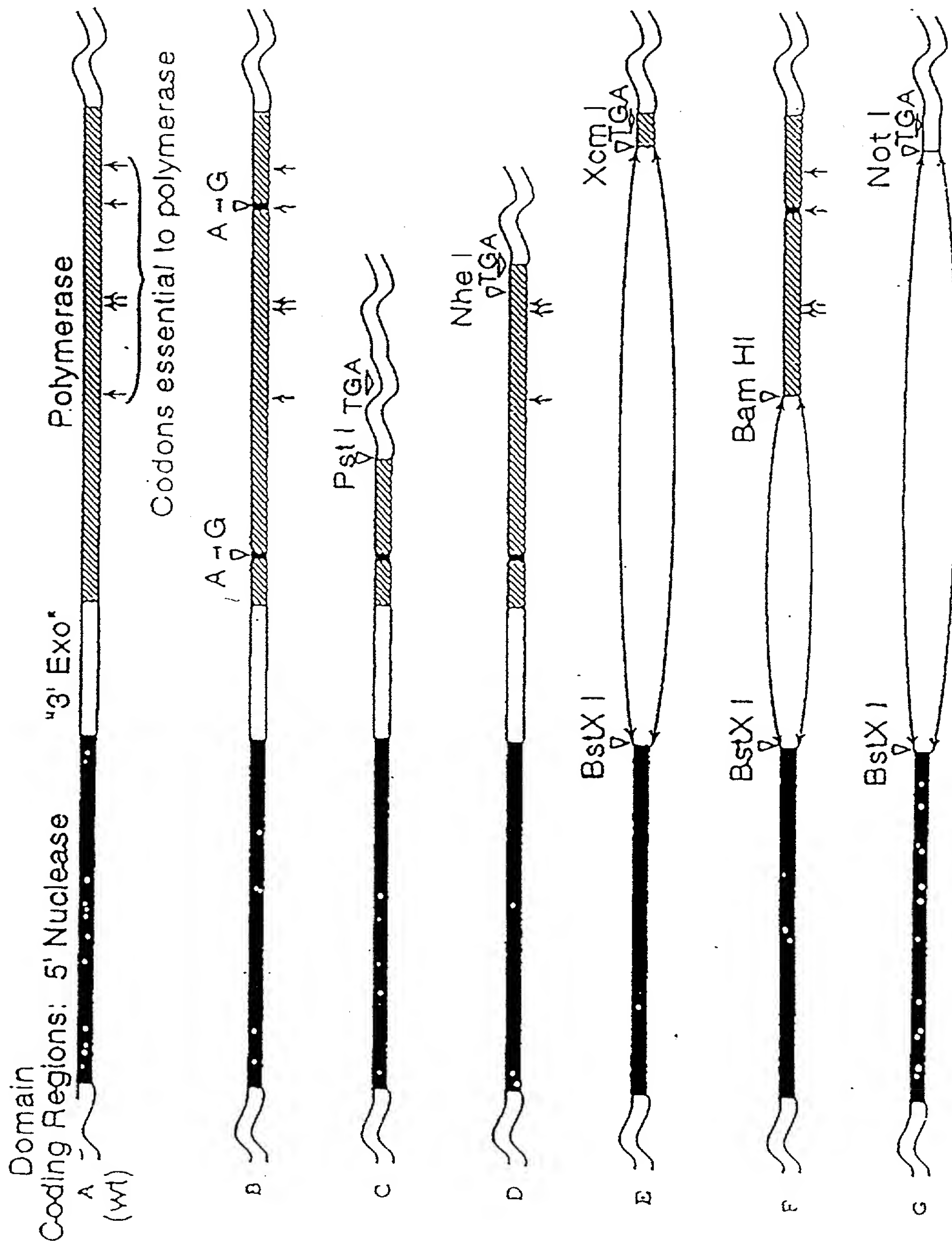
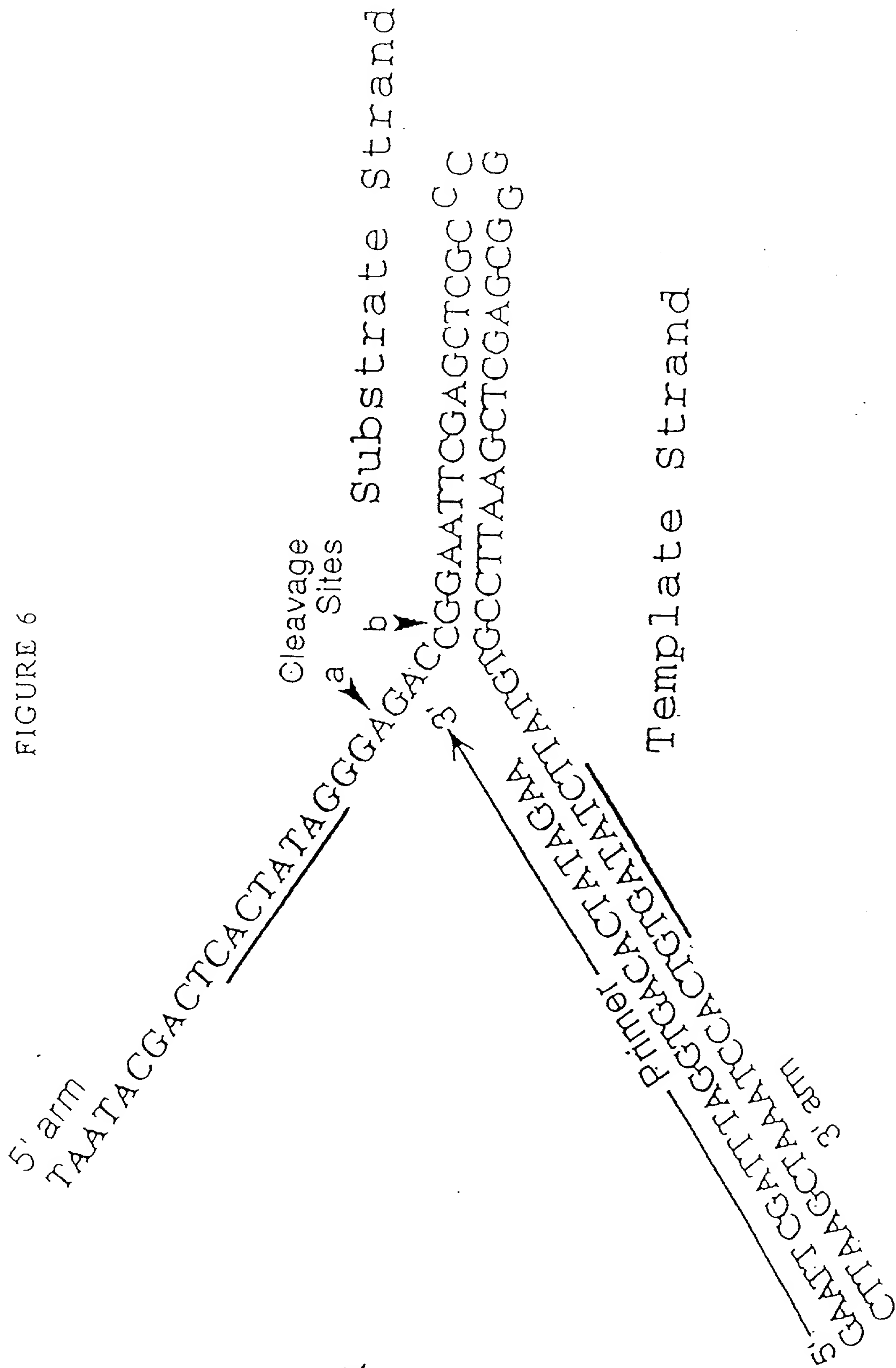


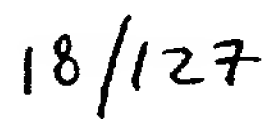
FIGURE 6



096400 10000

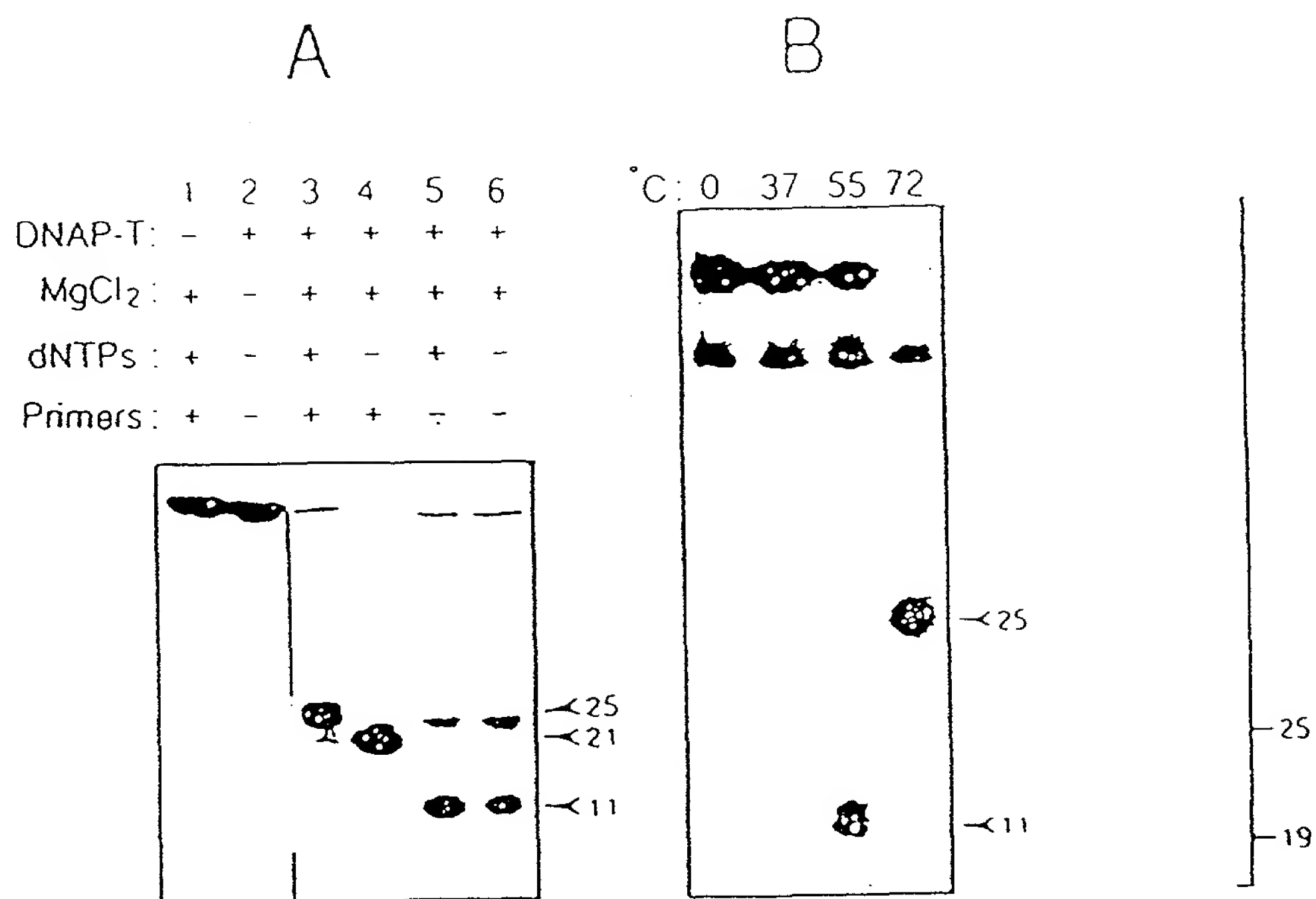
FIGURE 7



[illegible]

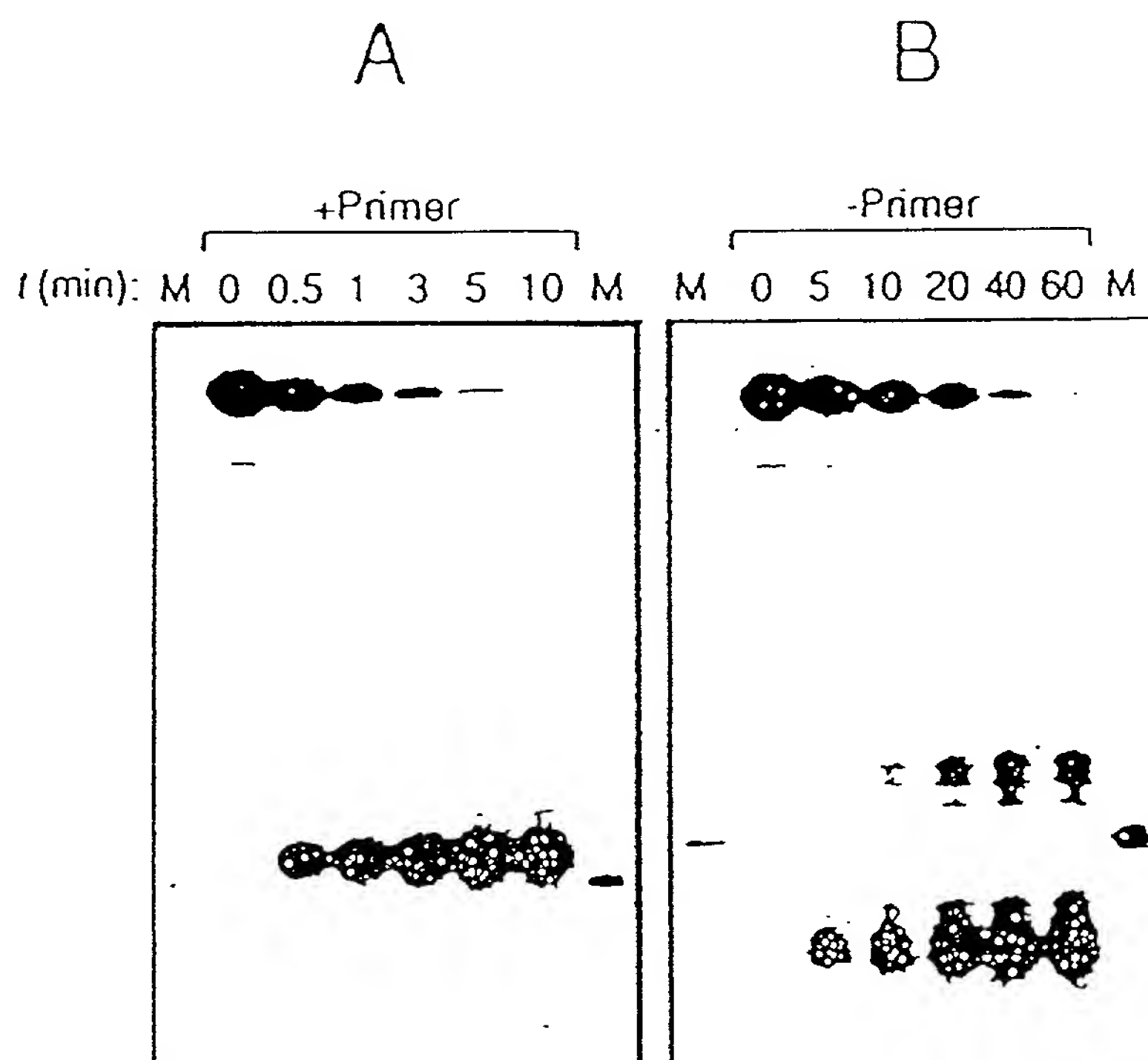
0034305 402900

FIGURE 9



009907 5034303 100600

FIGURE 10



21/127



009007" 00E4990

FIGURE 13

23/127

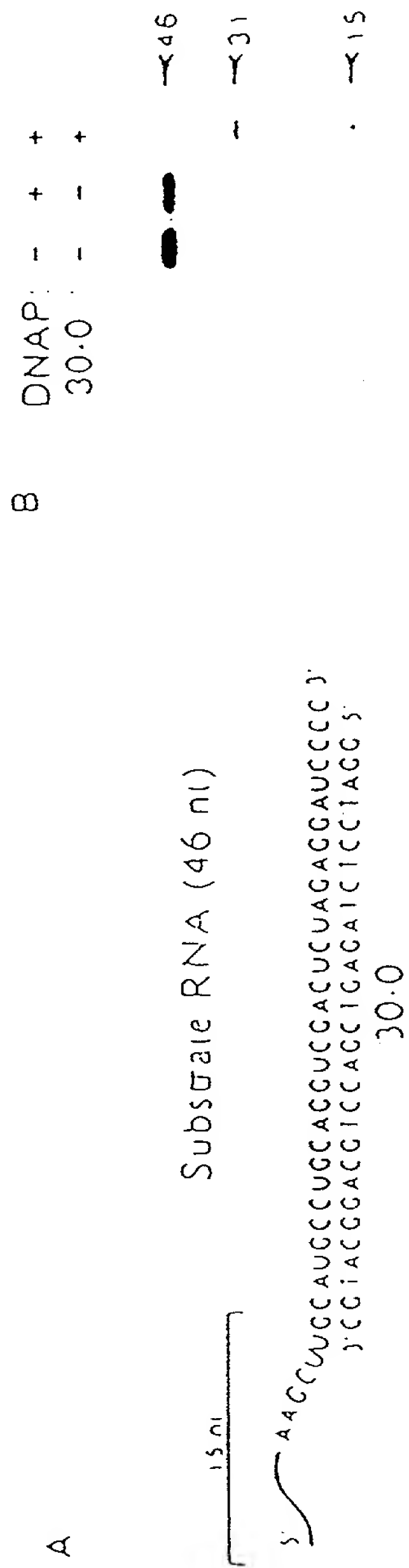
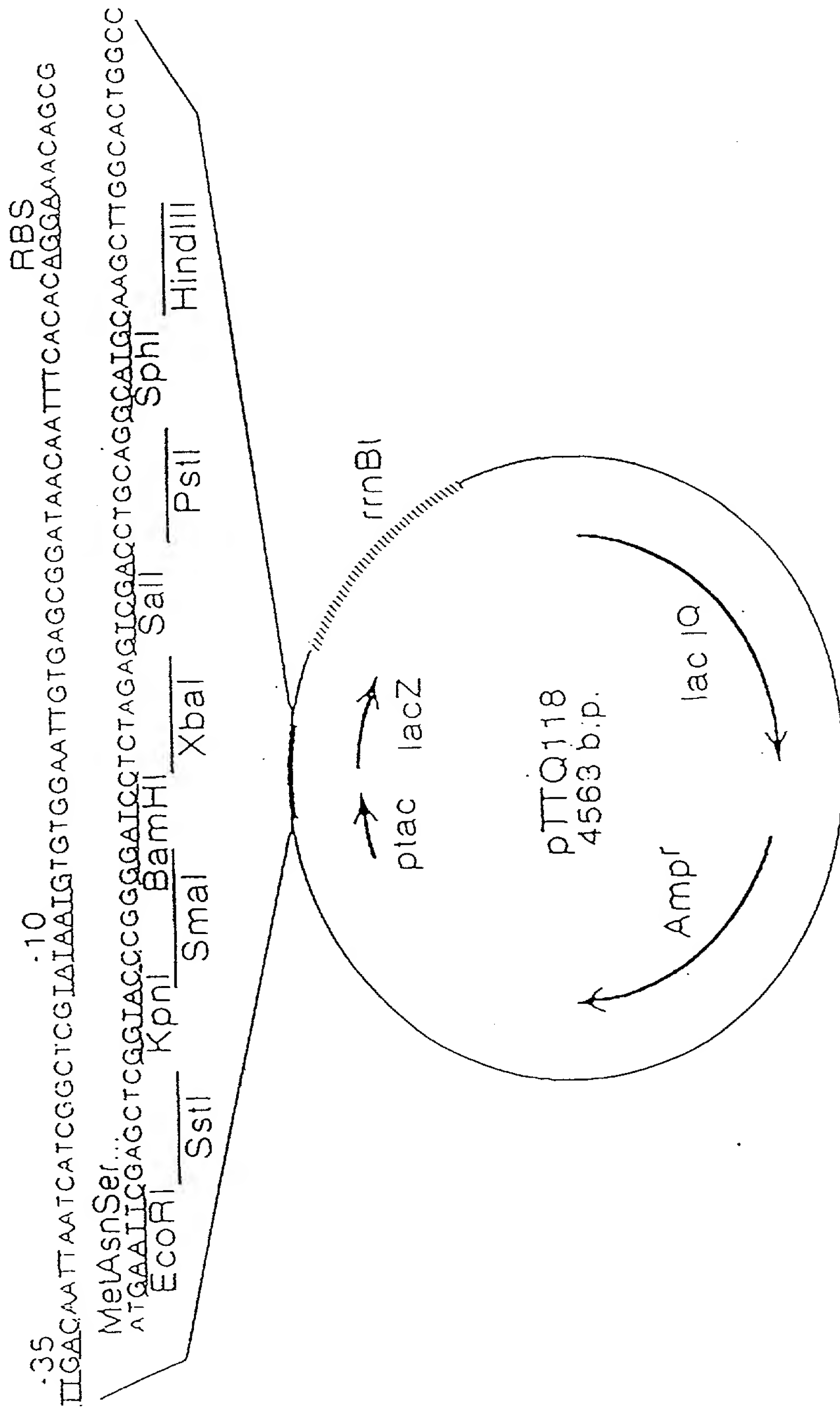
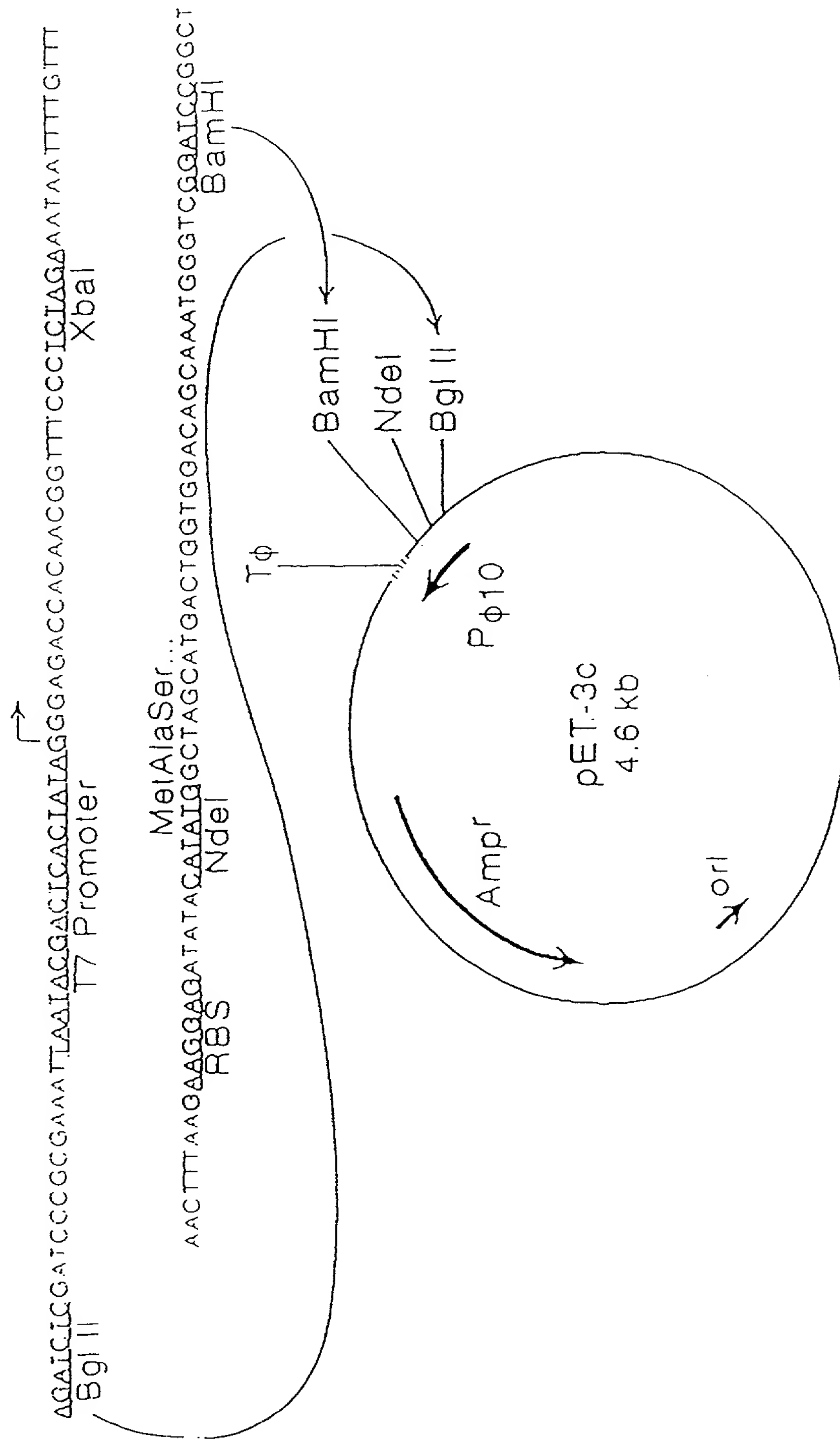


FIGURE 14



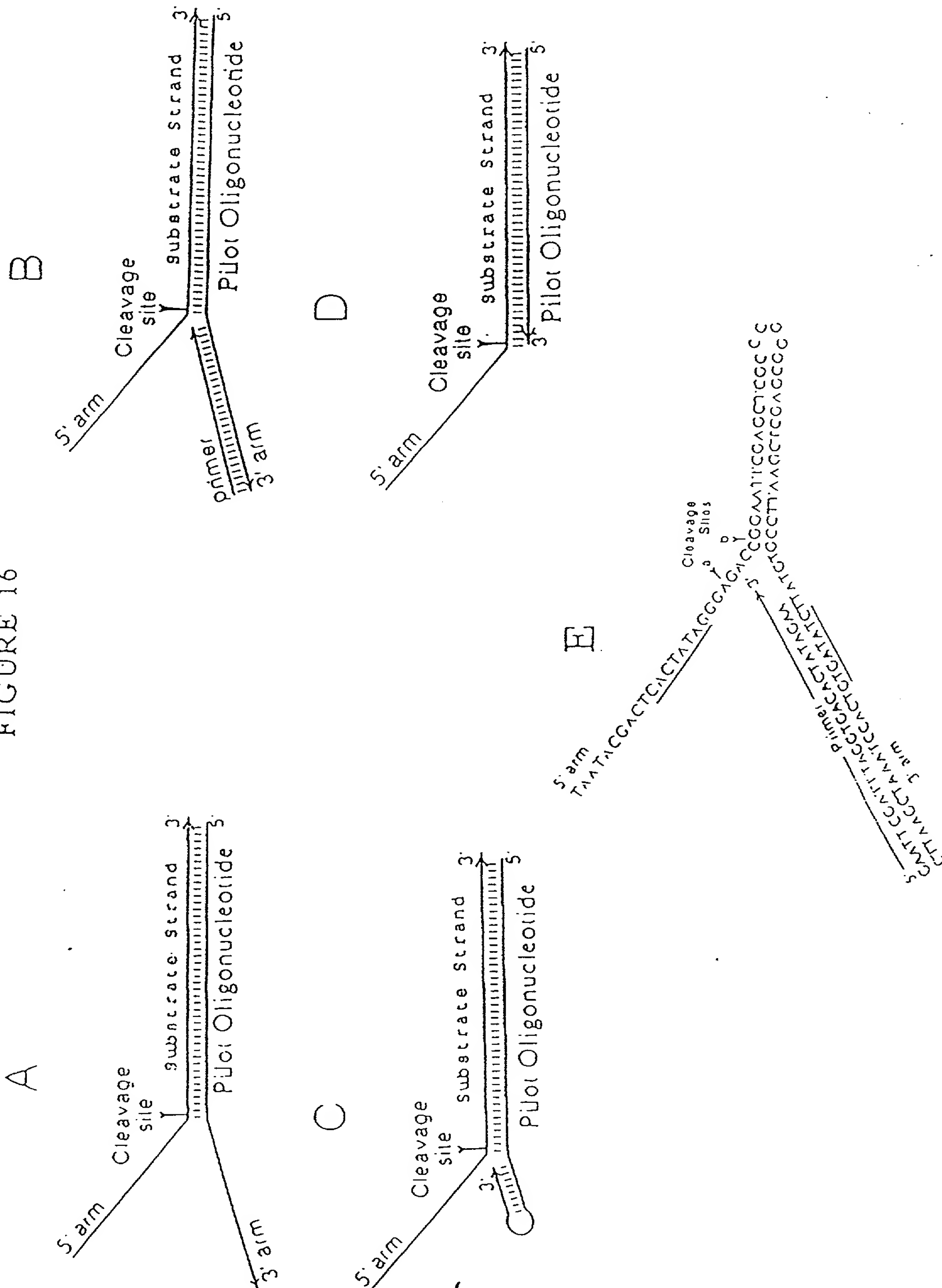
RBS: Ribosome binding site
 plac: Synthetic lac promoter
 lacIQ: Lac repressor gene
 lacZ: Beta-galactosidase alpha fragment
 rrnB1: E. coli rrnB transcription terminator

FIGURE 15



P_{φ10}: Bacteriophage T7 φ10 promoter
 T_φ: T7 φ Terminator
 RBS: Ribosome binding site

FIGURE 16



26/127

NATIONAL ASSOCIATION OF BROADCASTERS
1900 M STREET, N.W.
WASHINGTON, D.C. 20036
202-462-6789
WWW.NAB.TV

1 2 3 4 5 6 7



Uncleaved substrak

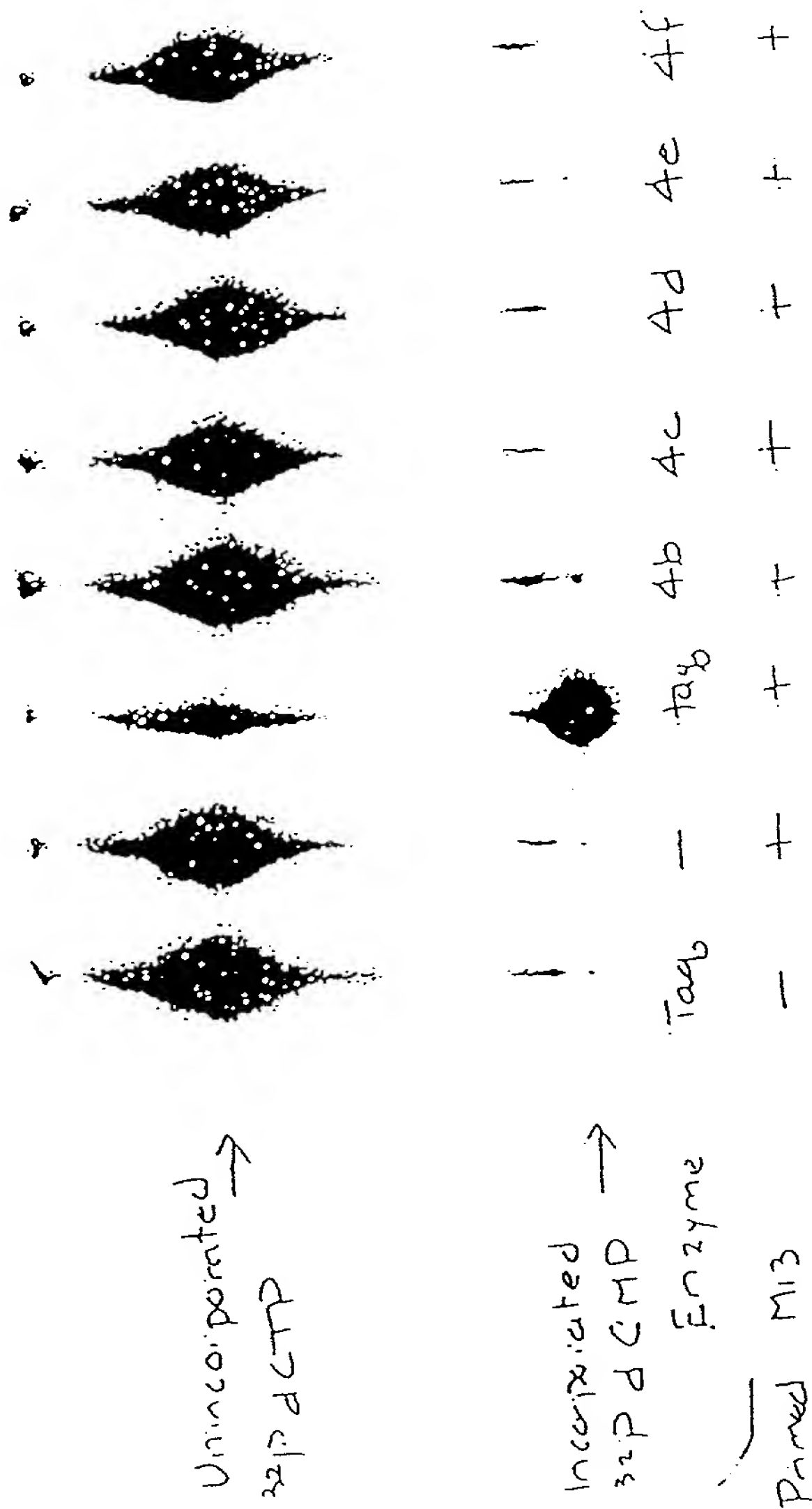
Cleared substrate

$$\begin{array}{ccccccccc} - & - & - & + & - & - & + & & \\ - & - & + & + & - & - & + & & \\ \text{Req} & \underbrace{\hspace{1.5cm}} & & \underbrace{\hspace{1.5cm}} & & & & & \\ & 4e & & 5b & & & & & \end{array}$$

dNTPs
Primer
Enzyme



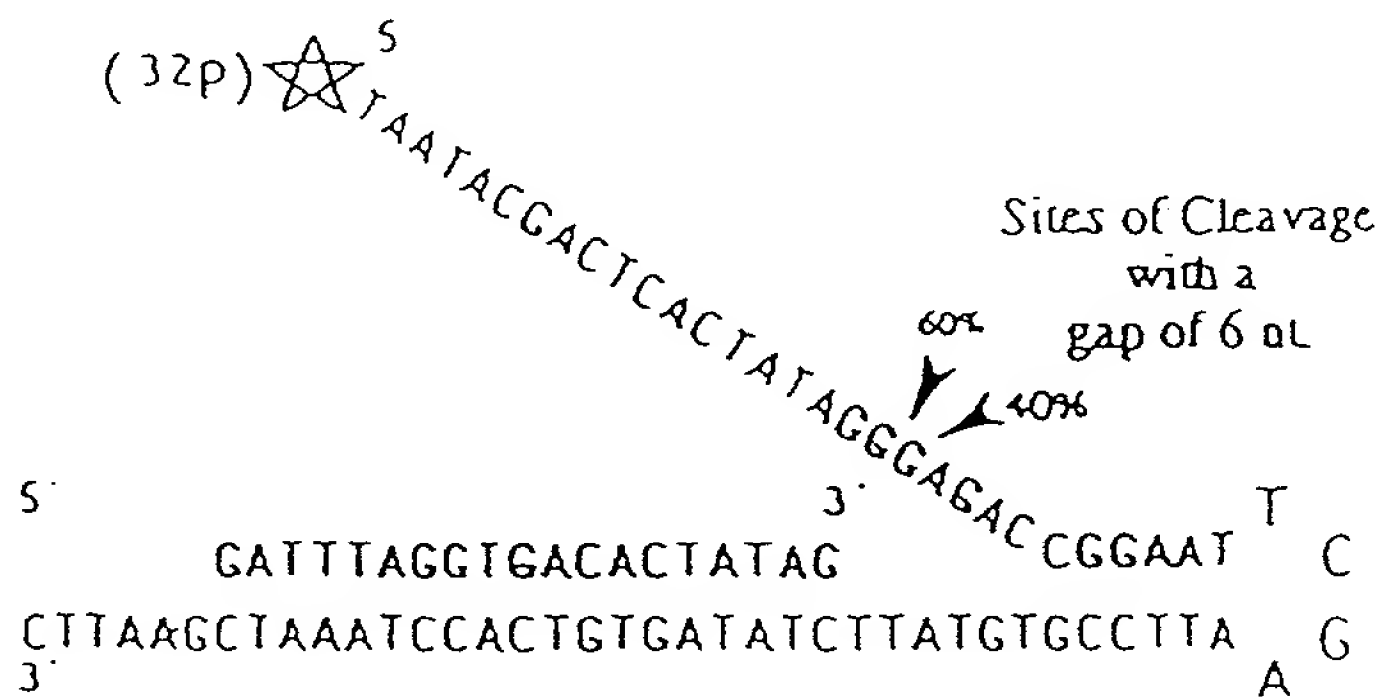
28/127



09684305-100600

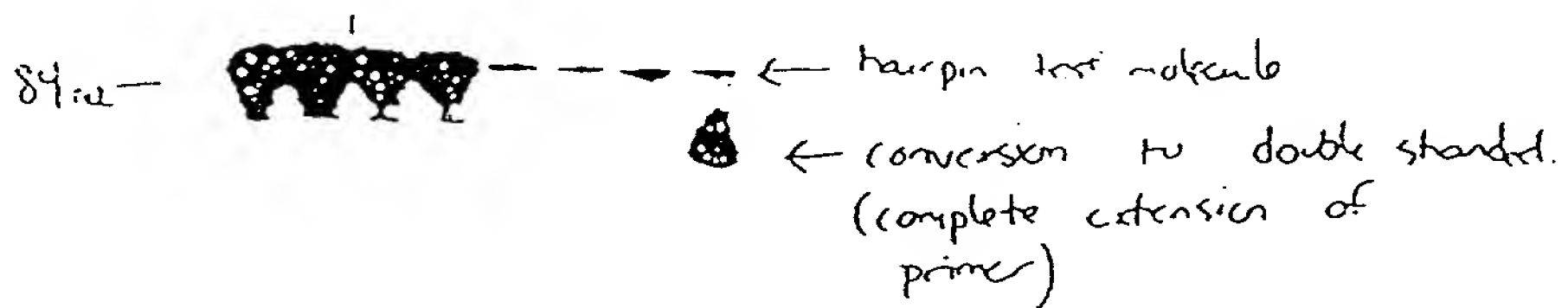
FIGURE 19

A

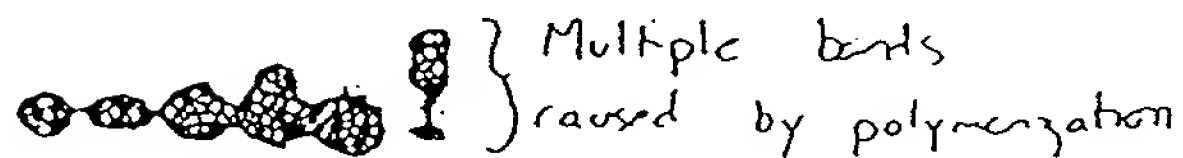


B

| | | "4d" | | "4b" | | | |
|---|---|----------------|---|------------------------|---|--------------------|---|
| | | No mutation | | (2 pr. small activity) | | Unmodified DNA Tag | |
| | | Activity | | Activity | | Activity | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | | C ₁ | | T ₁ | | T ₁ | |
| | | + | | - | | + | |



desired product →
21 nuc



↑ some aberrant cleavage with "4b" because of residual polymerase activity

29/127

[illegible]

Hand-drawn diagram illustrating the predicted cleavage sites for the A-Hairpin and T-Hairpin structures of the A-T-rich DNA region.

A-Hairpin:

Top strand (5' to 3'): CCGACGAACACCCACACACCCGACACAGI A

Bottom strand (5' to 3'): CAAACACgacACAgCagAgAgAACCCGACAA T

Label: A-Hairpin

T-Hairpin:

Top strand (5' to 3'): CTTCTCCTgTCTCCTcTcTcTTCCTCTTI A

Bottom strand (5' to 3'): CTCCTTGTTCCCTCTCTCCCTCTCTC T

Label: T-Hairpin

Predicted cleavage sites are indicated by dashed lines for the A-Hairpin and solid lines for the T-Hairpin.

Sequence of alpha primer:

5' GAC GAA CAA CCC AGA CAG CG 3'

$$\begin{array}{r}
 \text{5' } \lambda\text{CACAGI} \quad \text{A} \\
 \text{GTACC C} \\
 \text{CATGC A} \\
 \text{3' CAAACACgGCACAgCAgAgAgAACCCACAA' } \quad \text{T}
 \end{array}$$
 Cleaved A-Hairpin

$$\begin{array}{r}
 \text{5' CCTCTTI} \quad \text{A} \\
 \text{CTACC T} \\
 \text{CATGC C} \\
 \text{3' CTCTTGTTCCTCTCTCCCTCTCTC' } \quad \text{T}
 \end{array}$$
 Cleaved T-Hairpin

Top = T-Hairpin
Bottom = A-Hairpin

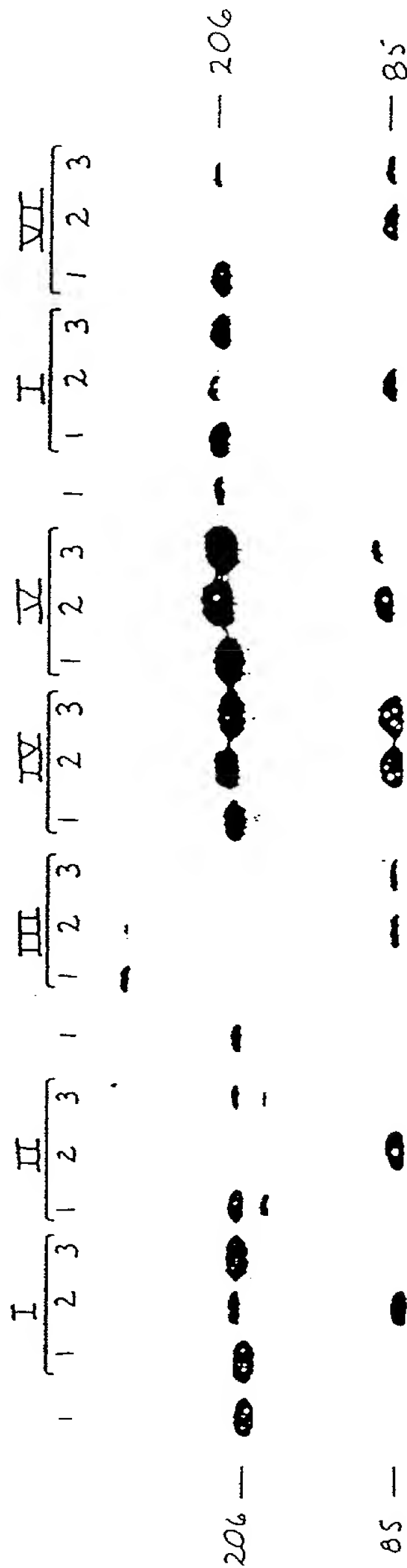
Restriction sites (from left to right): BsmAI, Rsa I, Mnl I, Nla III, HgiC I, Nla IV, Rsa I, Kpn I, BsmAI.

Sequence (Top strand): CTTCTGCTGTCCTCTCTCTTCCCTCTTGTAACATGCTACCTGCTGTCGCTCTCTCCCTTCTTCTGCT


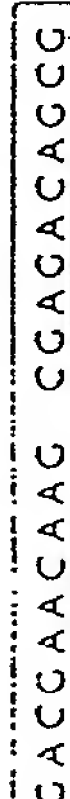
Sequence (Bottom strand): CAAACACGACACACCCACACAGAACCGAGAACATCGTATACCAATCGACACACCGACACAGCGAACCAACAGCC



72

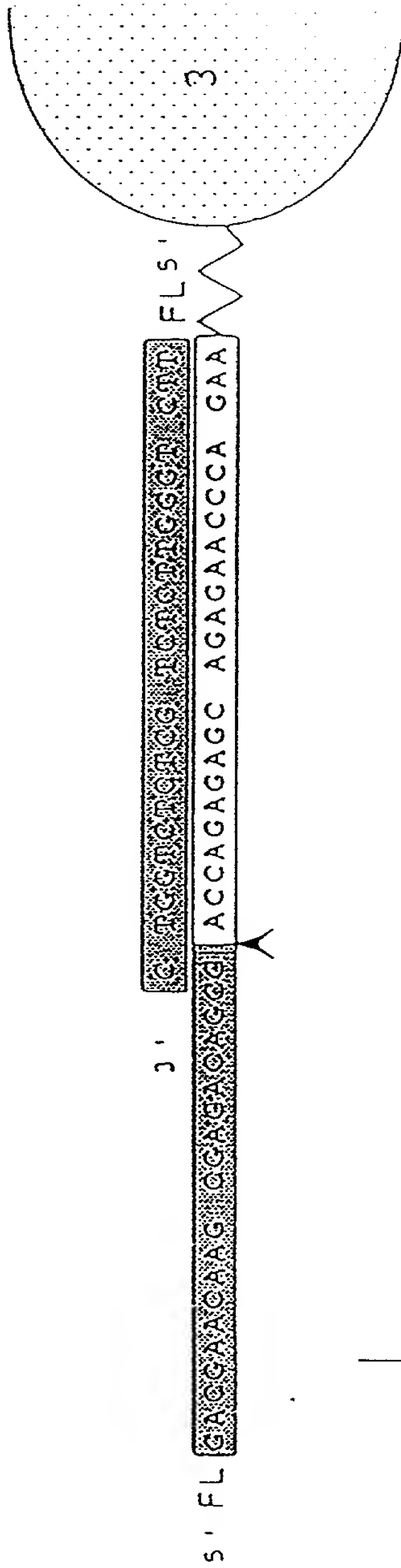
33/127



2

5'   3'

CTGCTTCTTC GCTCTCTCG   FL 5'



S · FL GACGAGCAG CCGAGCACCG

AMERICAN SOCIETY OF MECHANICAL ENGINEERS

—

| | |
|------------------|----------|
| | Σ |
| | Σ |
| A \| I | I |
| A \| + | + |
| A \| + | + |
| A \| + | + |
| A \| - | - |
| I \| + | + |
| I \| - | - |
| I \| I | I |
| | Σ |
| | Σ |

1

1111

1

7

12/21/2017

1

1

[illegible]

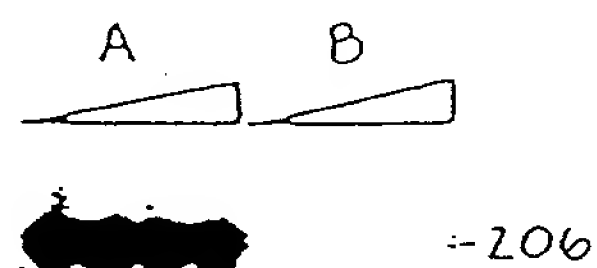
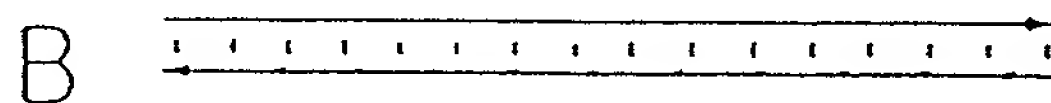
B



36/127

The logo of the National Association of Broadcasters (NAB) is a circular emblem. It features a central design with the letters 'NAB' prominently displayed. Surrounding this central text are various inscriptions, including 'National Association of Broadcasters' and 'Broadcasters for the People'. The logo is rendered in a high-contrast, black and white style.

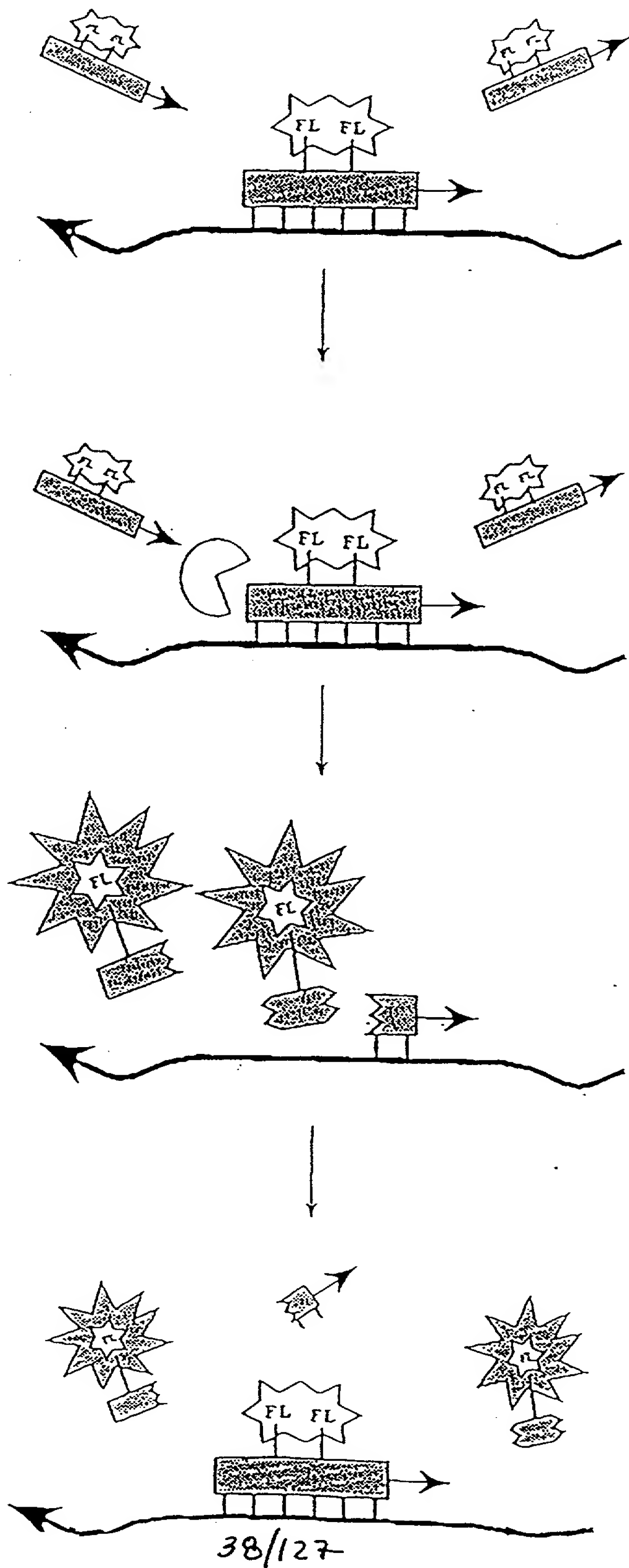
A


$$\cdot = {}^{32}\text{P}$$

37/127

09684305 400600

FIGURE 27



09684309 430600

FIGURE 28B

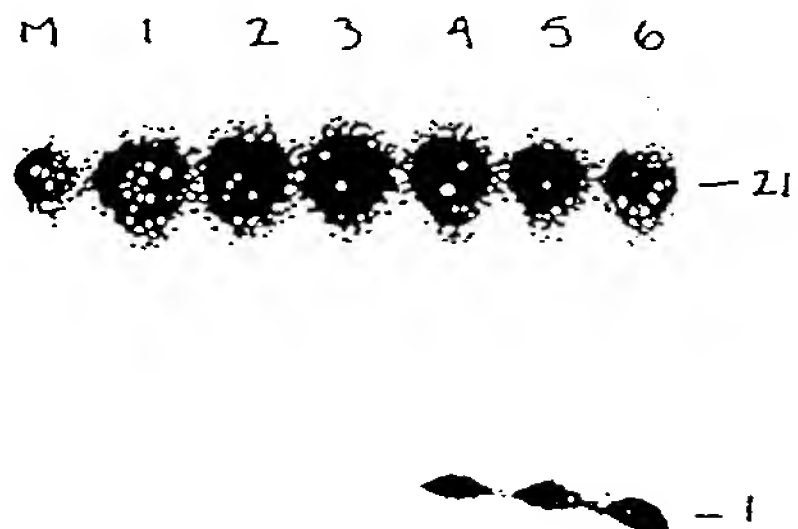
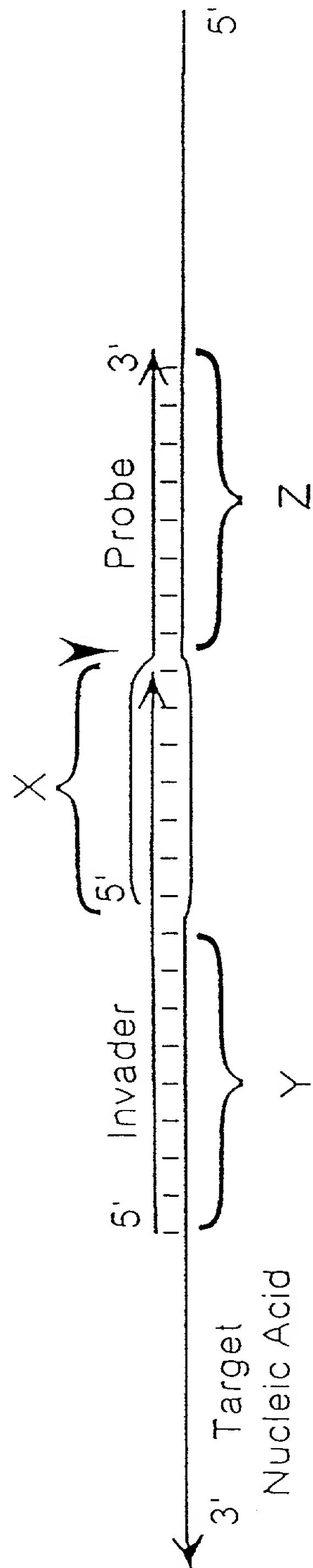


FIGURE 29



41/127

FIGURE 30

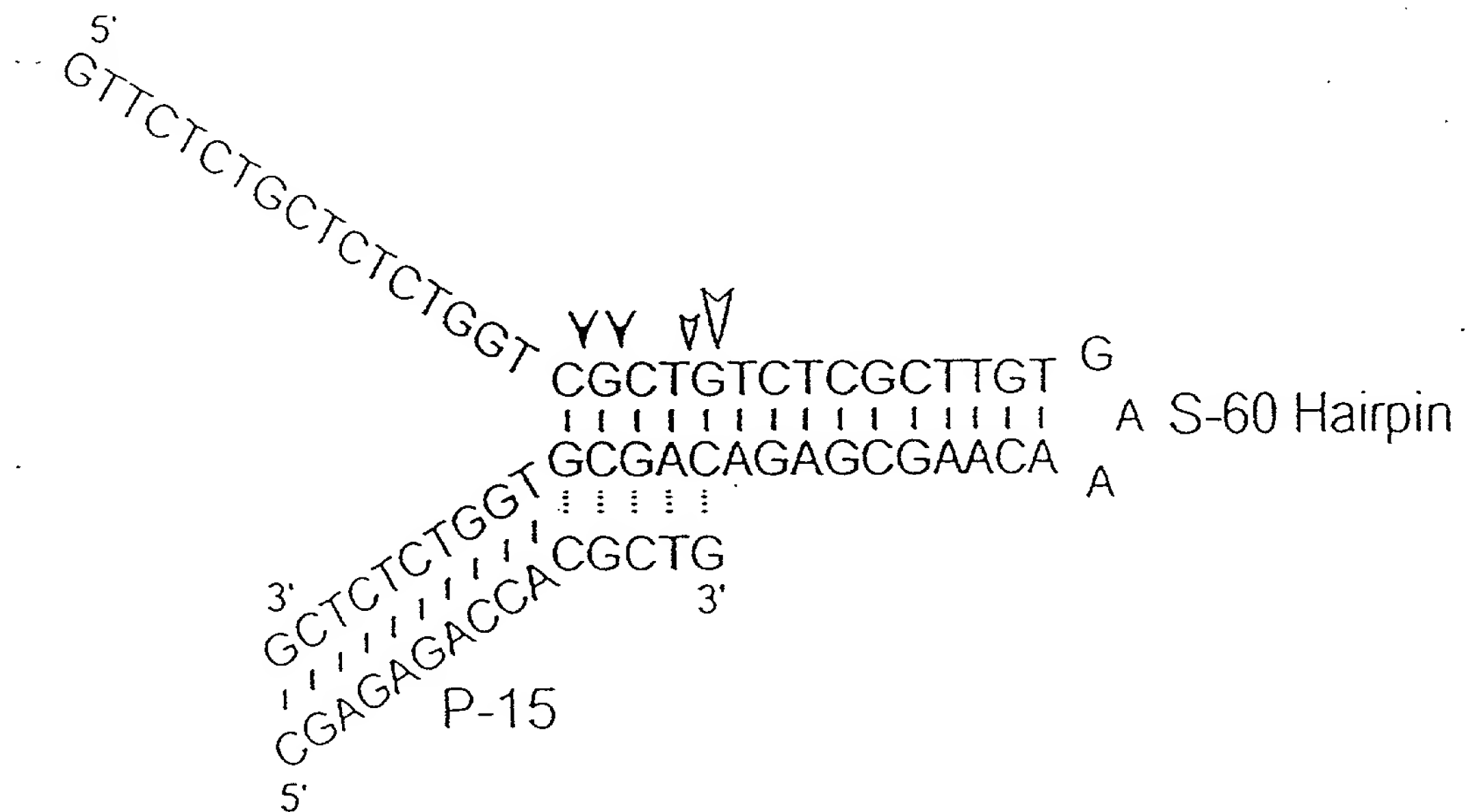
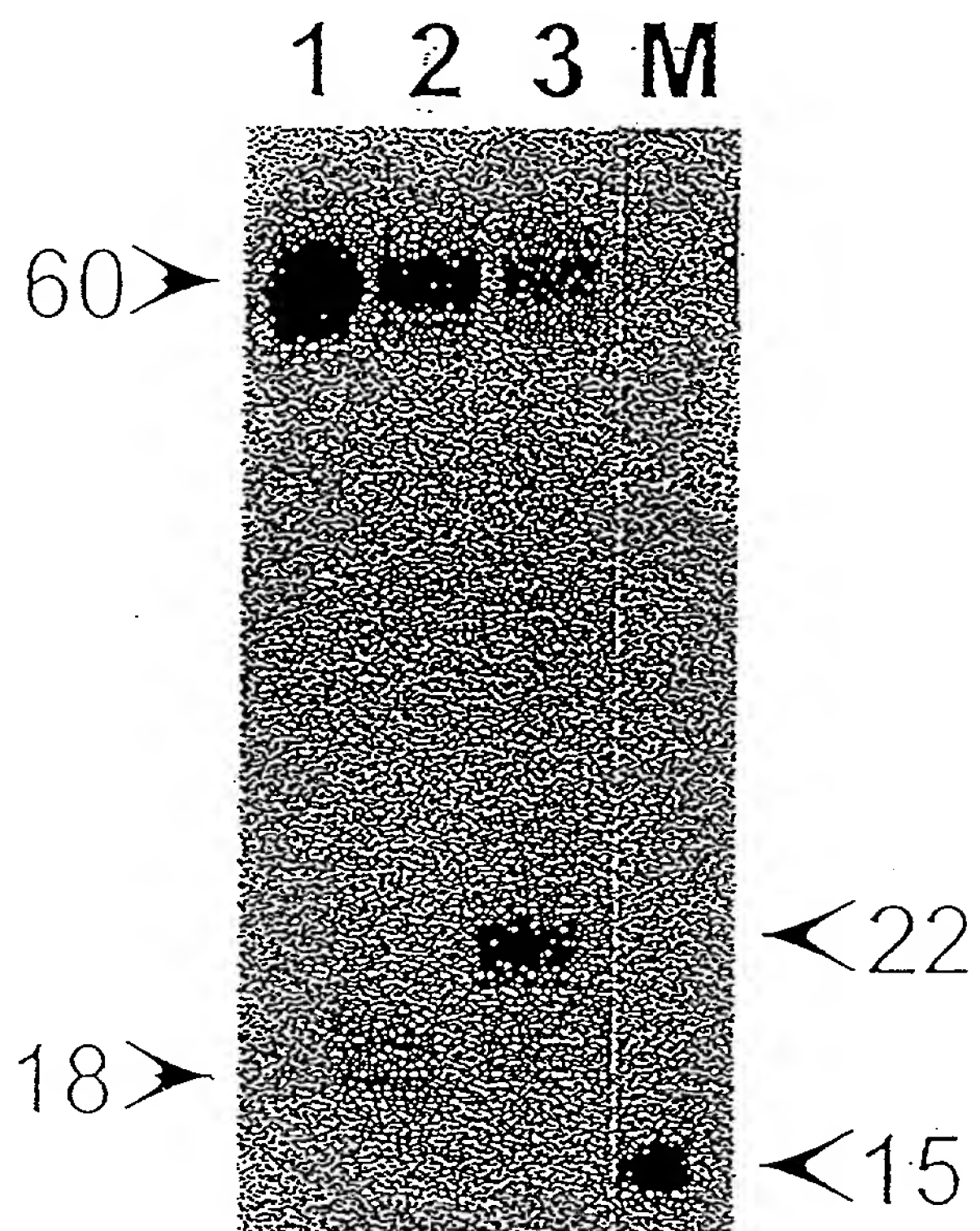
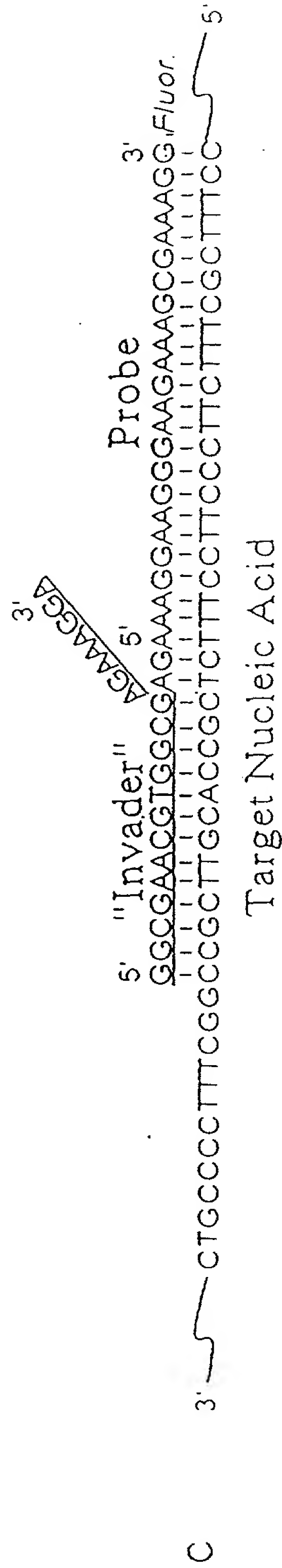
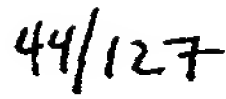


FIGURE 31



—



003007 50543960

8

7

6

5

4

3

2

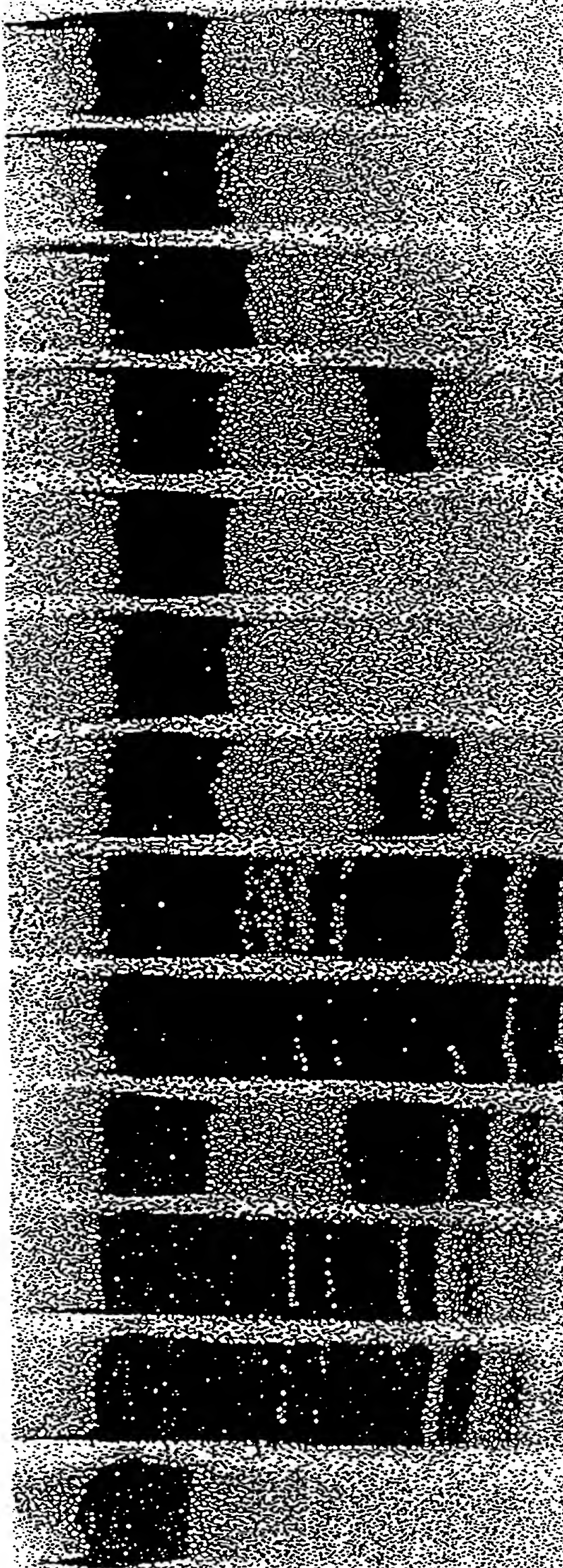
1

A

45/127

CONFIDENTIAL
FIGURE 34 50E+8960

M 1 2 3 4 5 6 7 8 9 10 11 12



A

46/127

FIGURE 350E+B56D

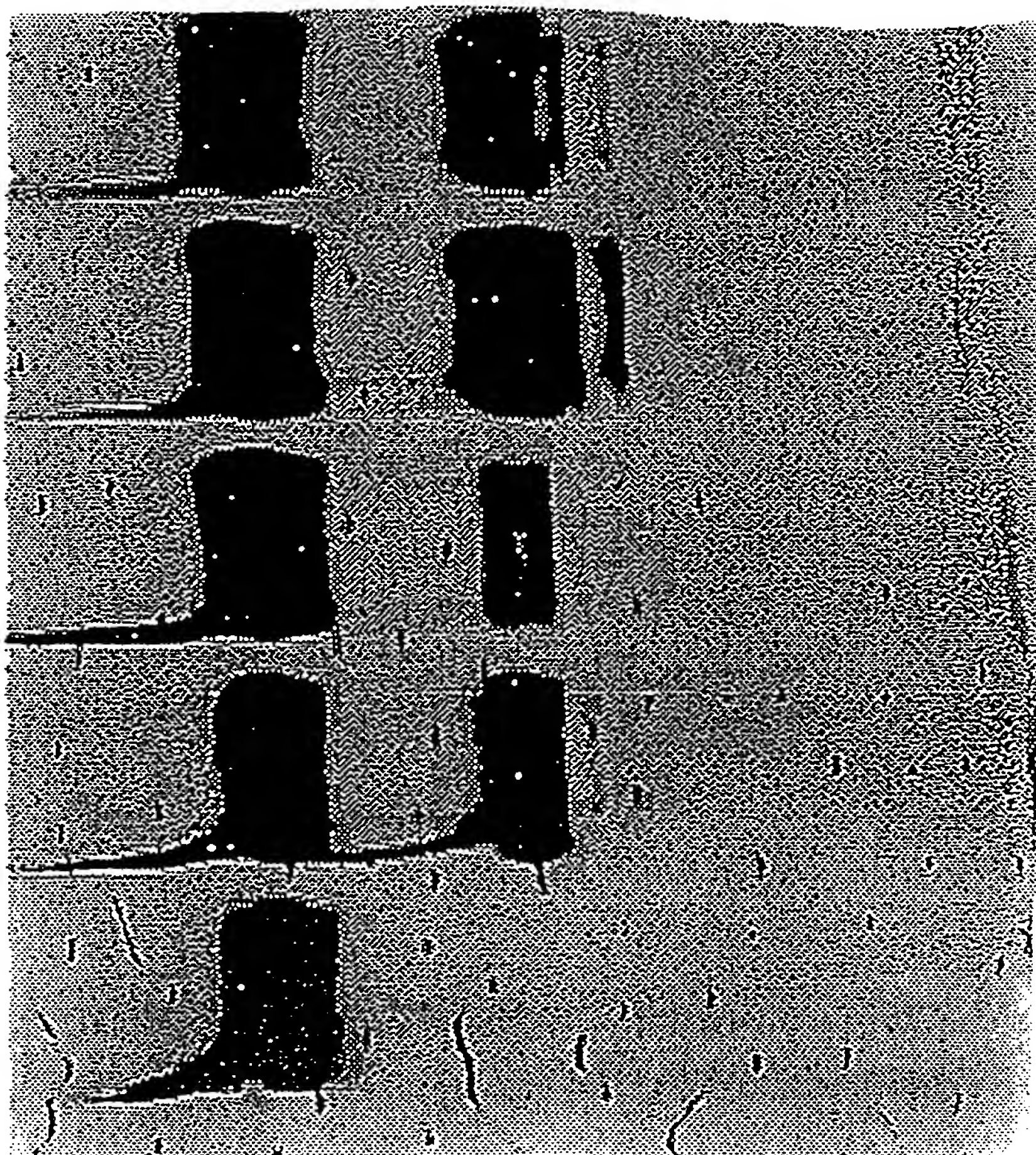
5

4

3

2

1

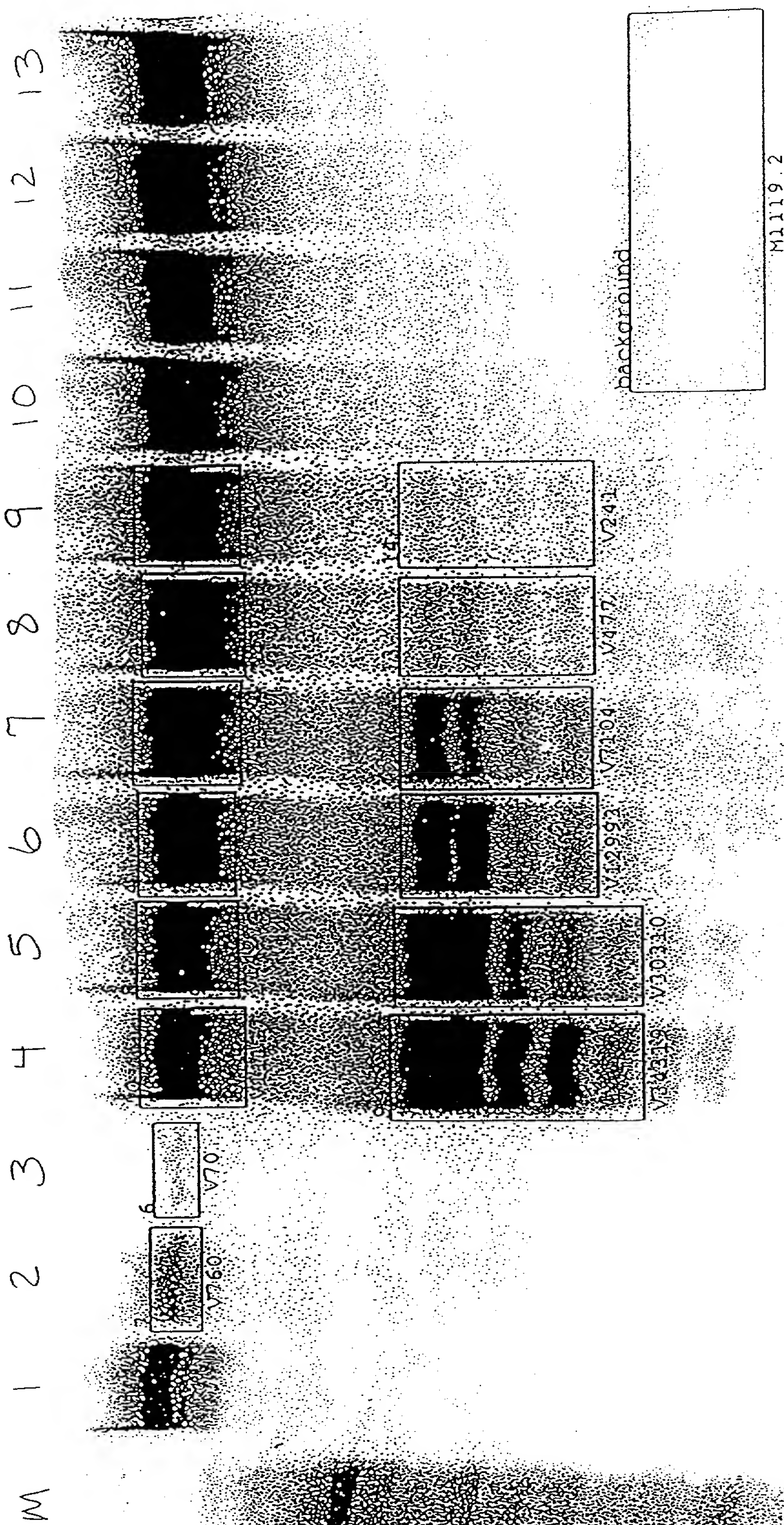


26 A

47/127

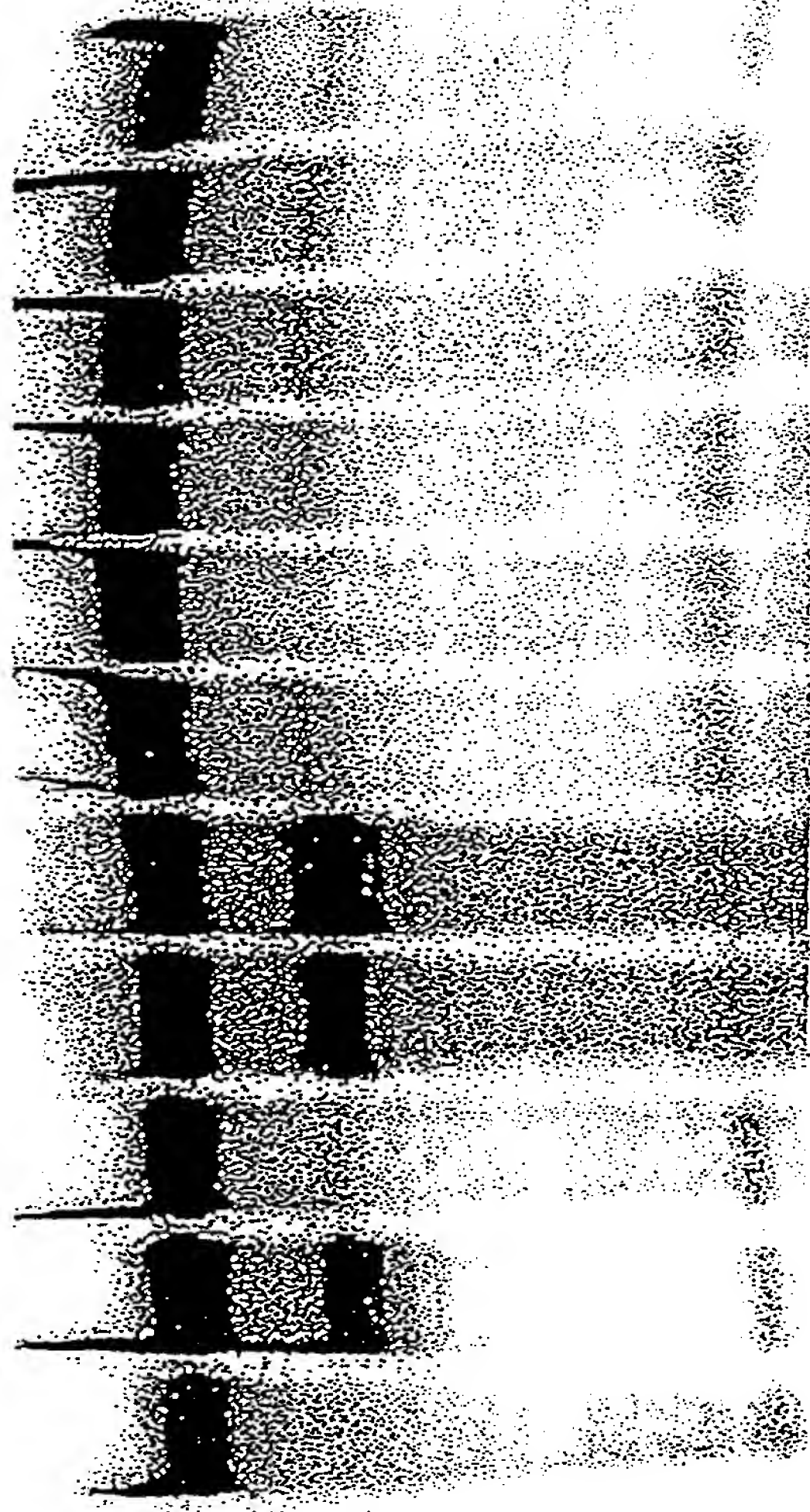
009007" SE+950

FIGURE 36



DD FORM 37-18950

1 2 3 4 5 6 7 8 9 10 11



A A

49/127

00900T" 50E72960

FIGURE 38

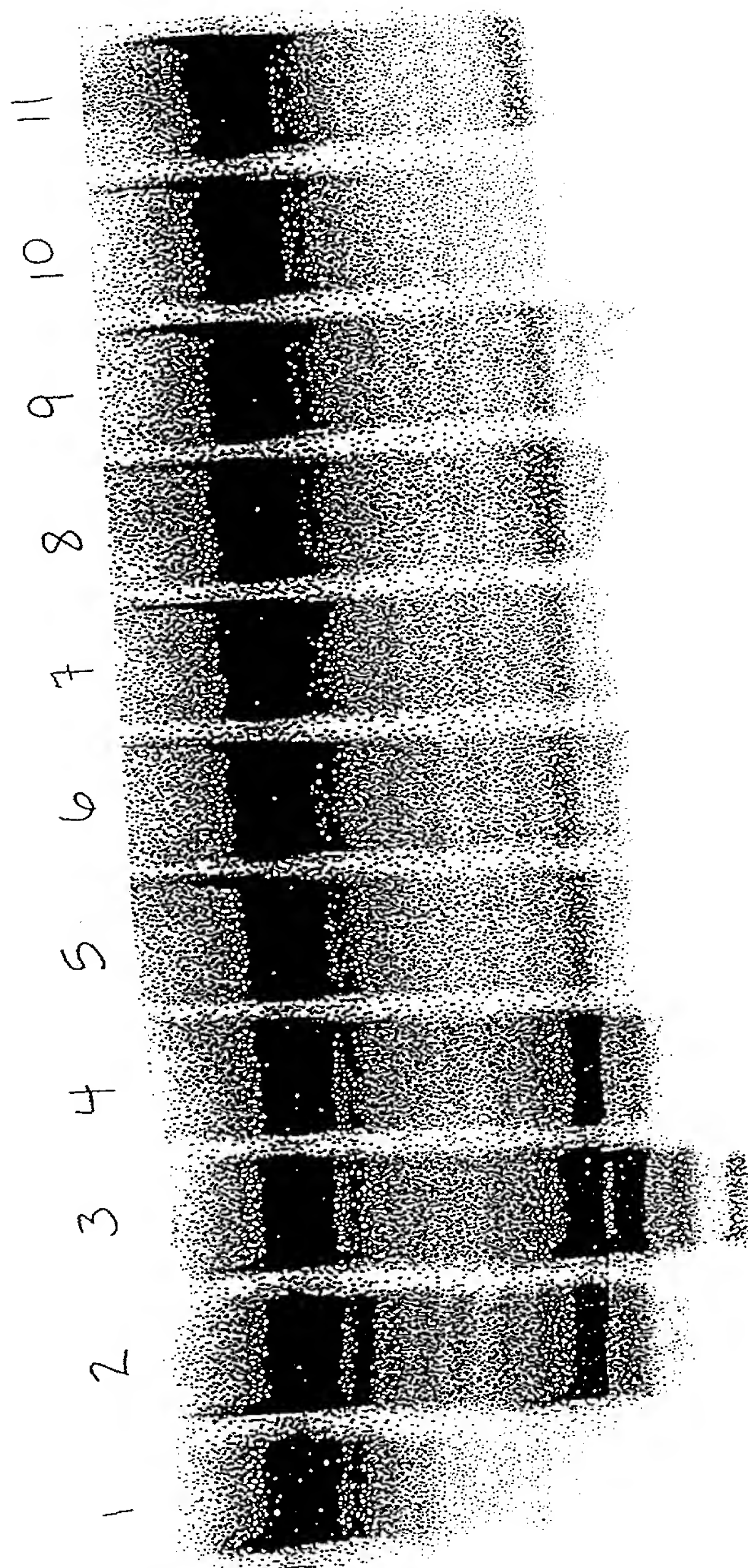


FIGURE 39

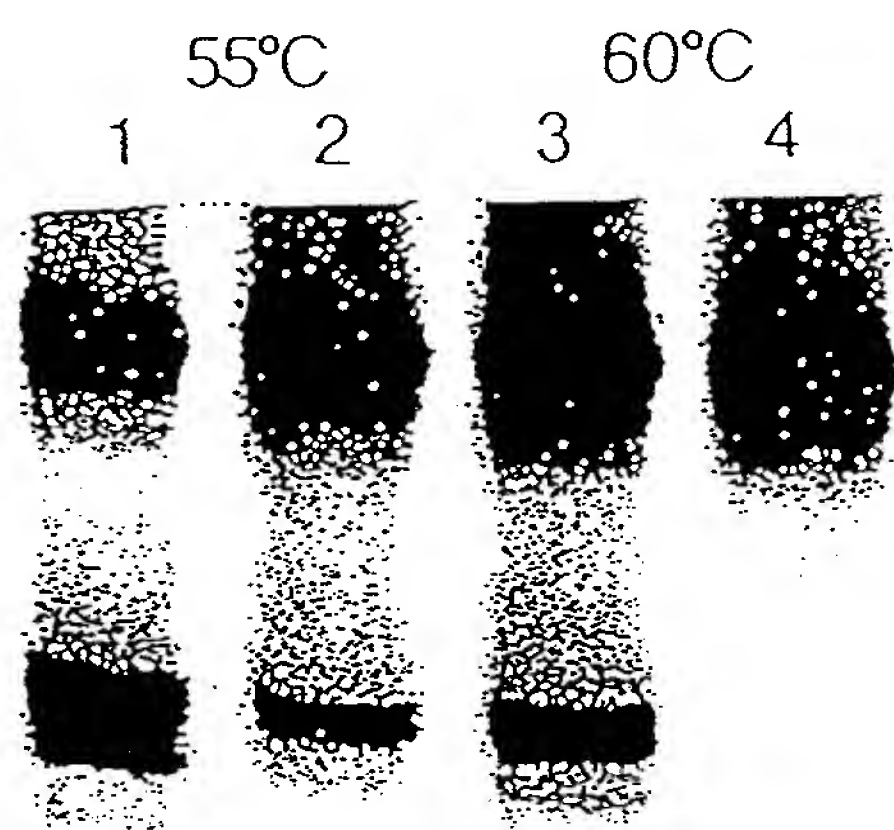
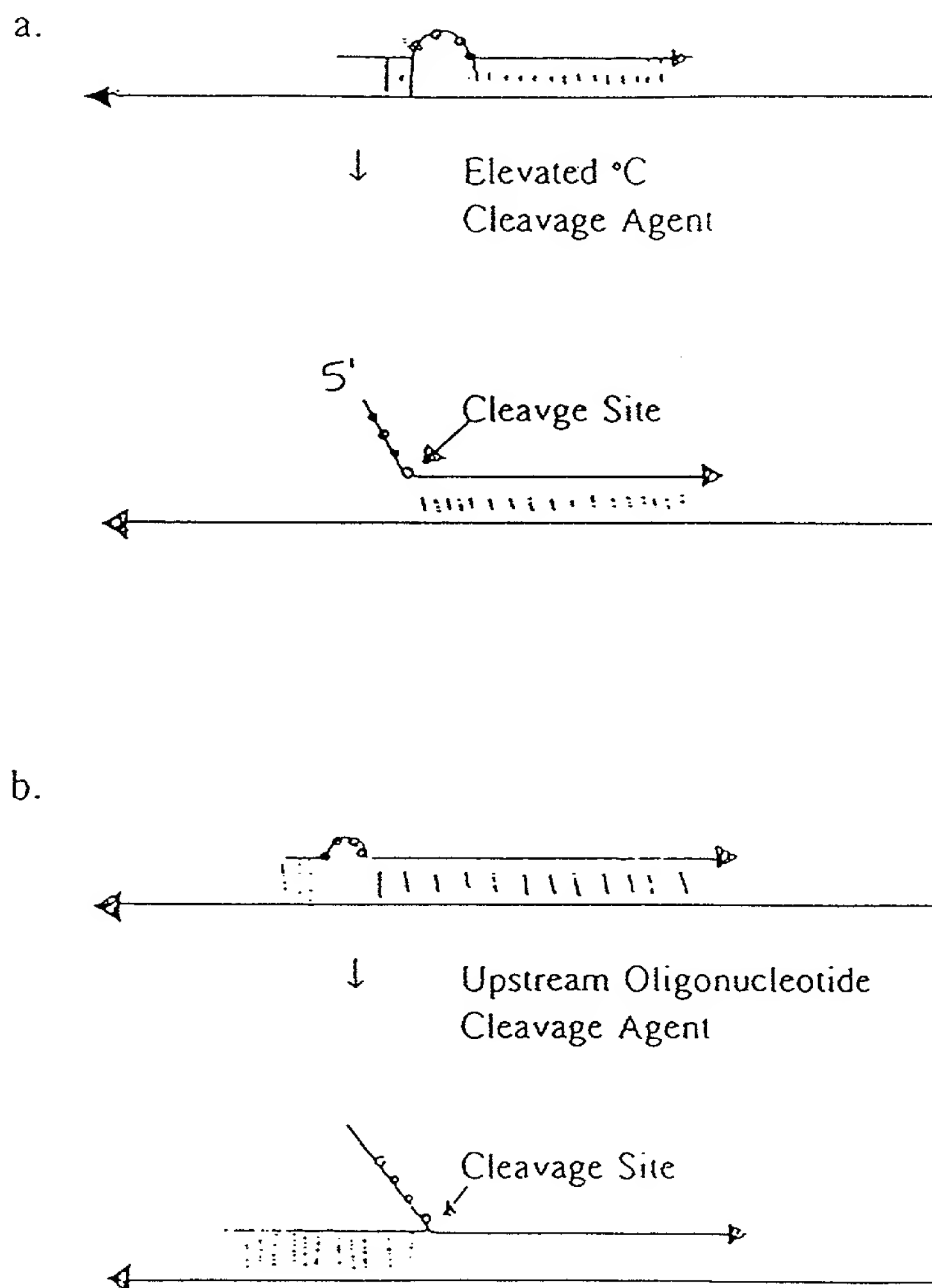


FIGURE 40

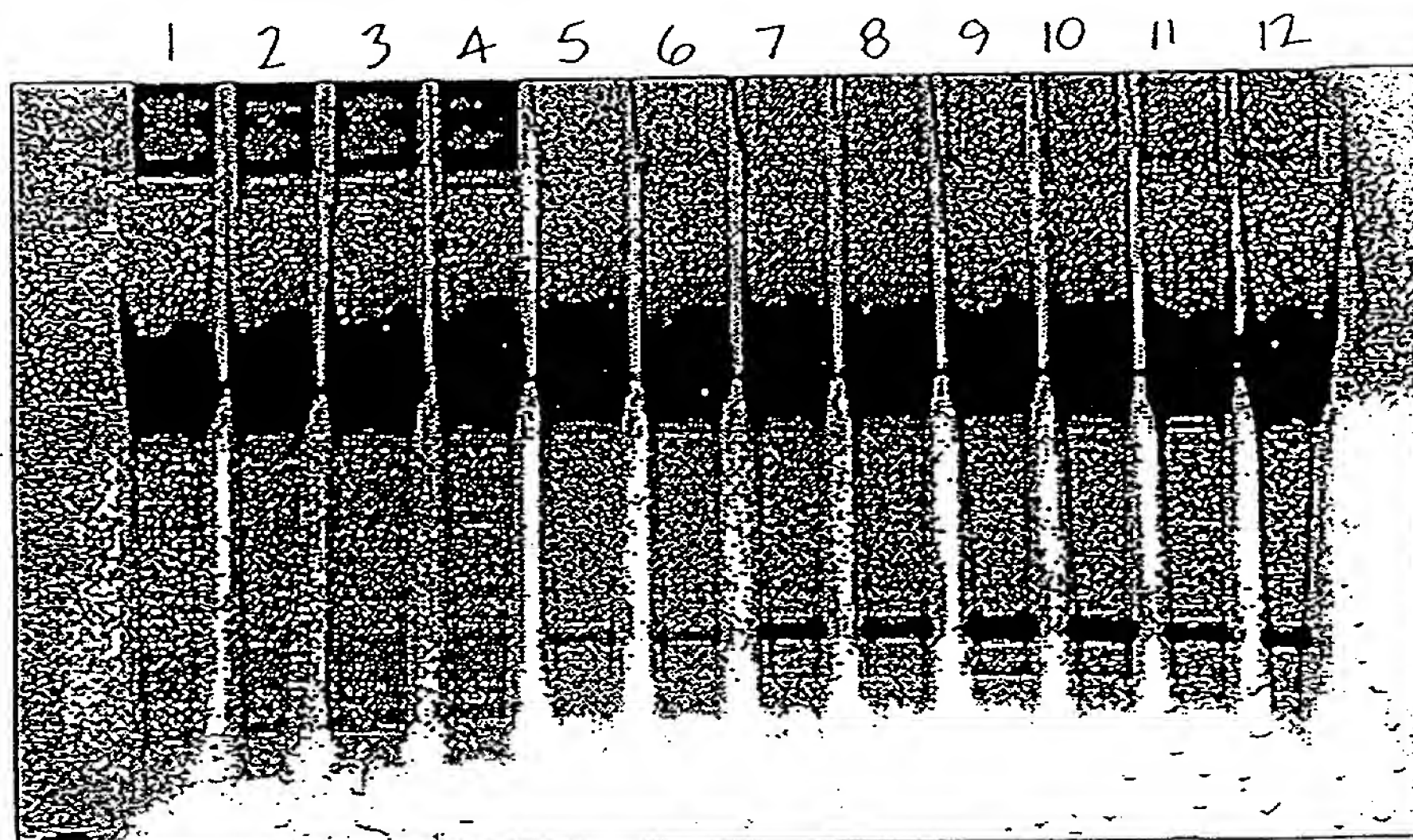


The logo is a circular seal for the American Society of Mechanical Engineers (ASME). It features a central shield with a gear and a hammer, surrounded by the text "AMERICAN SOCIETY OF MECHANICAL ENGINEERS" and "FOUNDED 1880".

53/127

•

FIGURE 42



09634303 100600

54/127

FIGURE 43

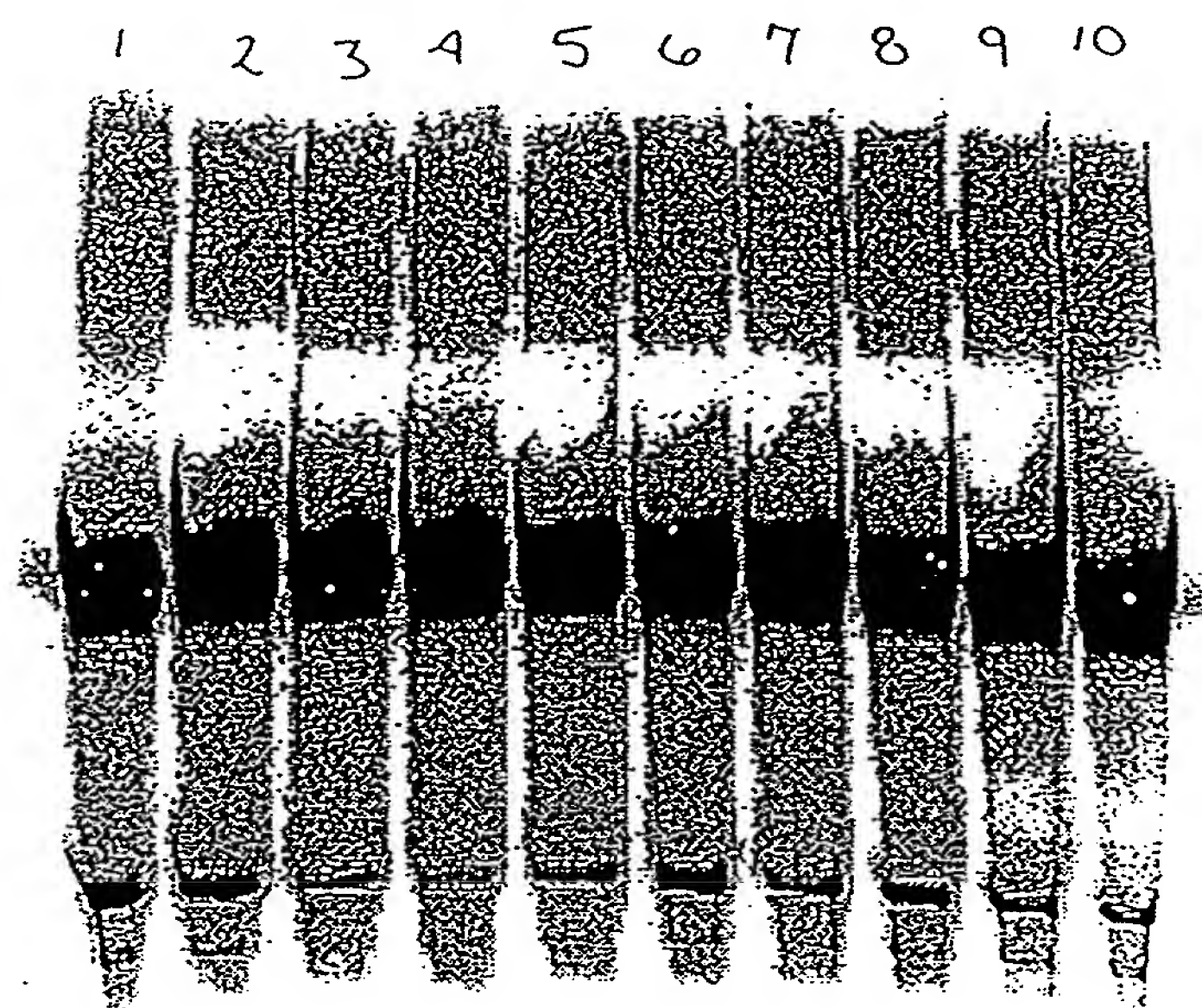


FIGURE 44

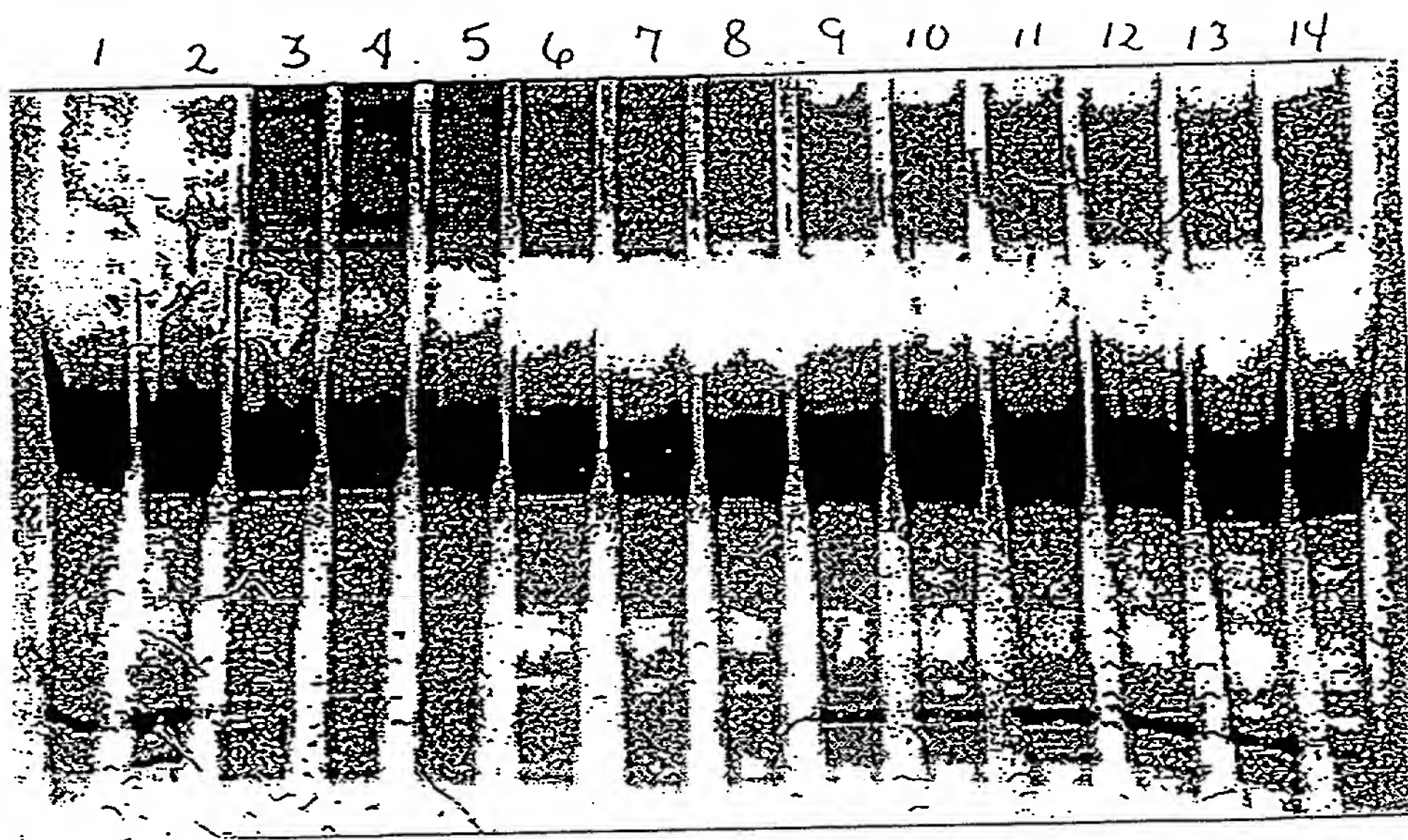
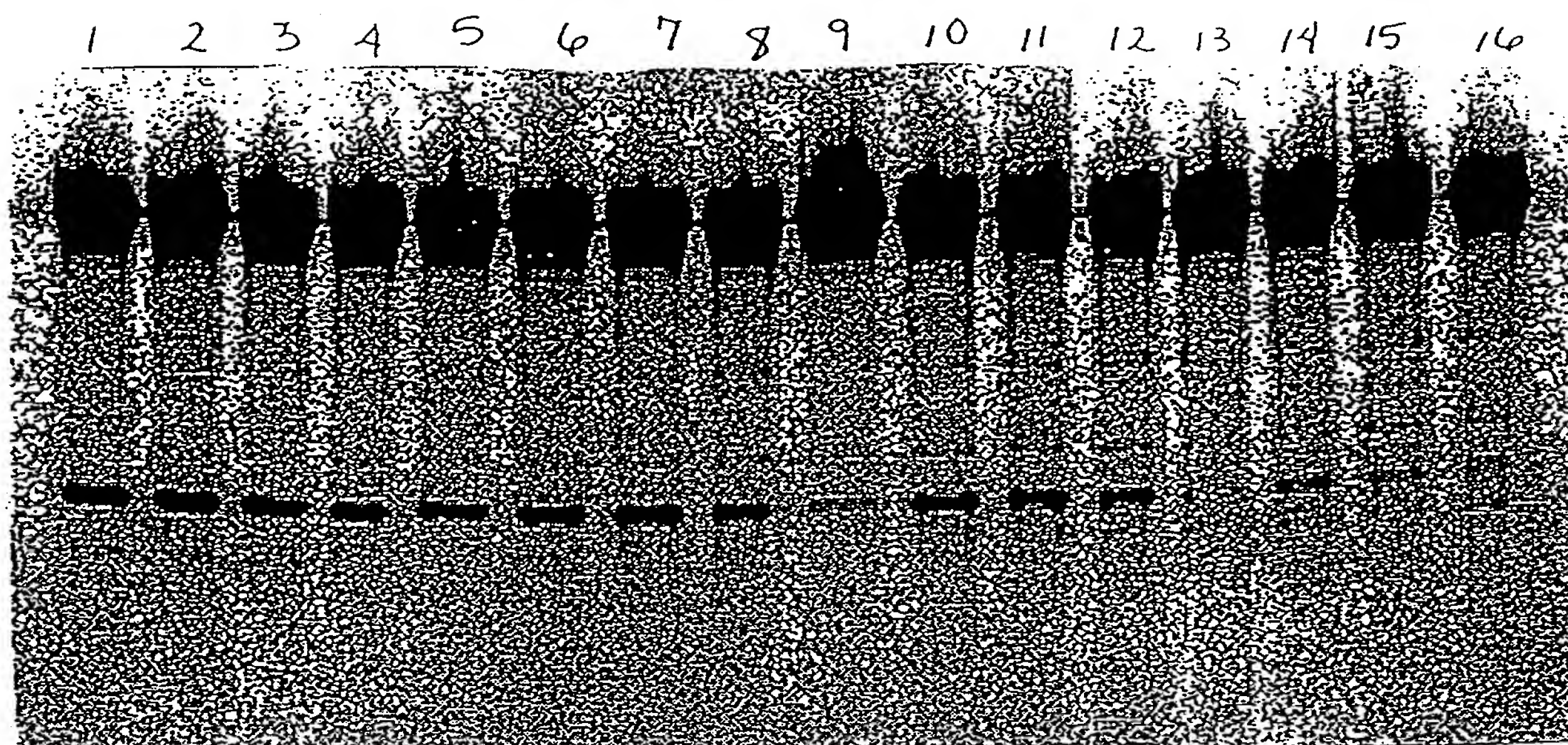
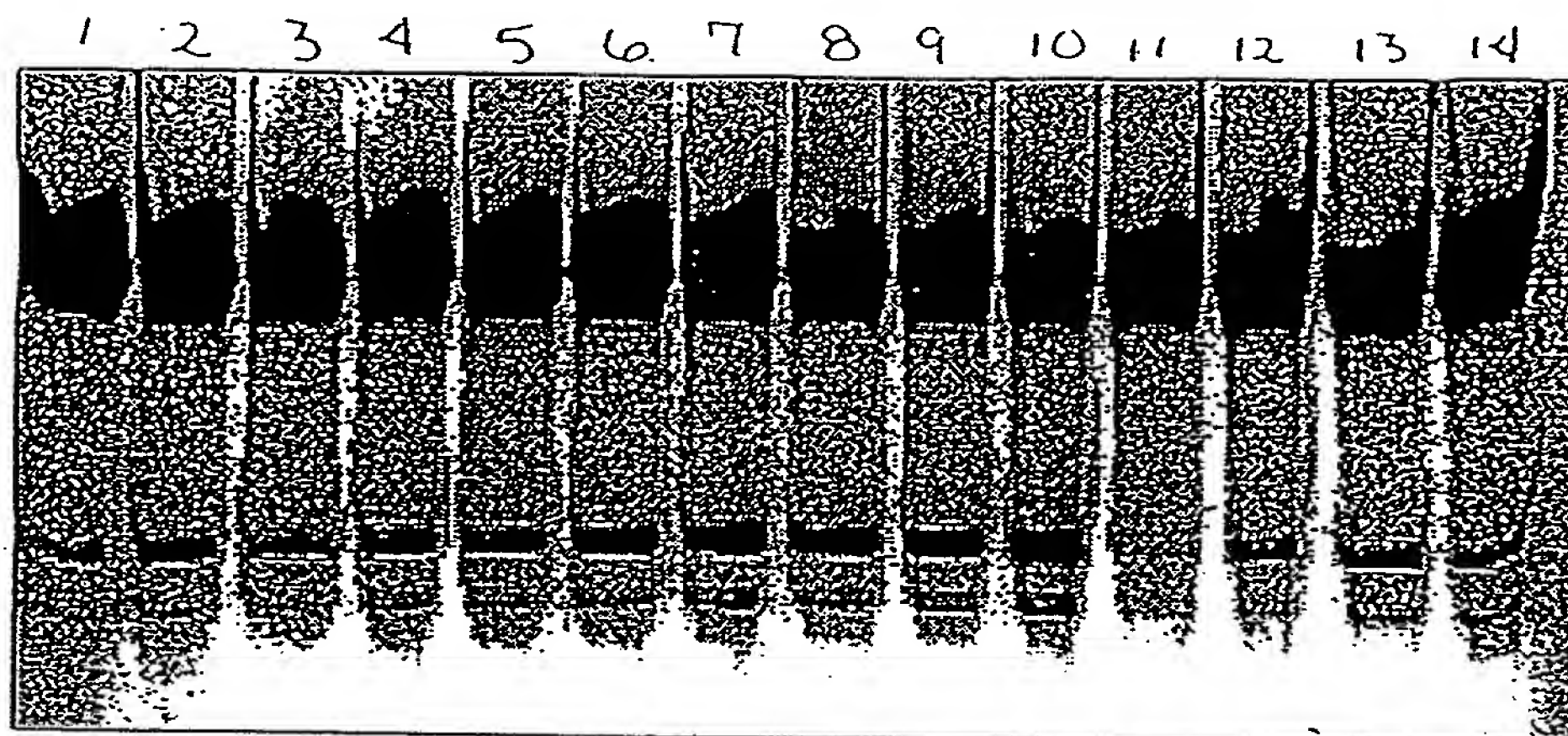


FIGURE 45



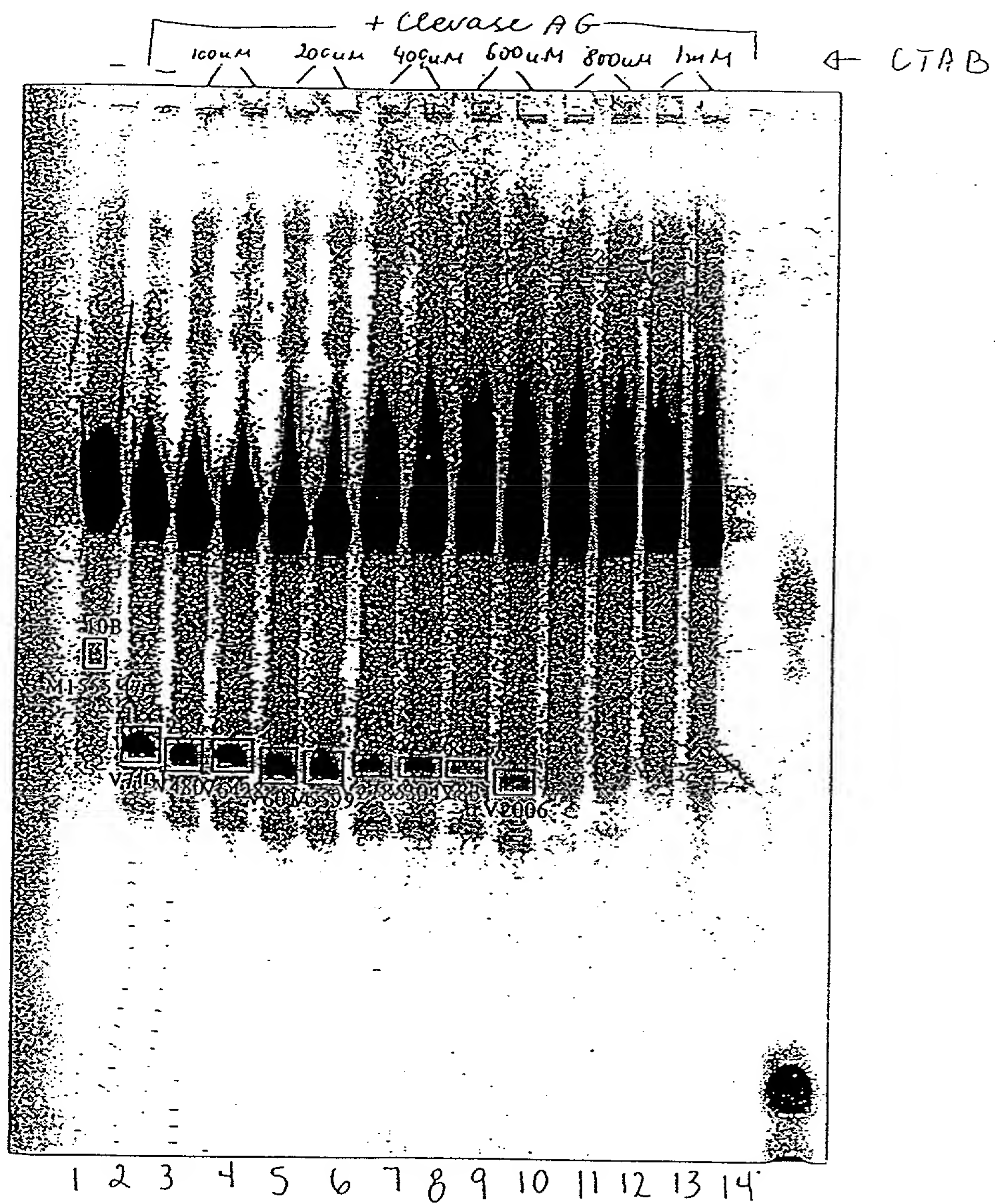
009007 50848960

FIGURE 46



003004 50E+8950

FIGURE 47

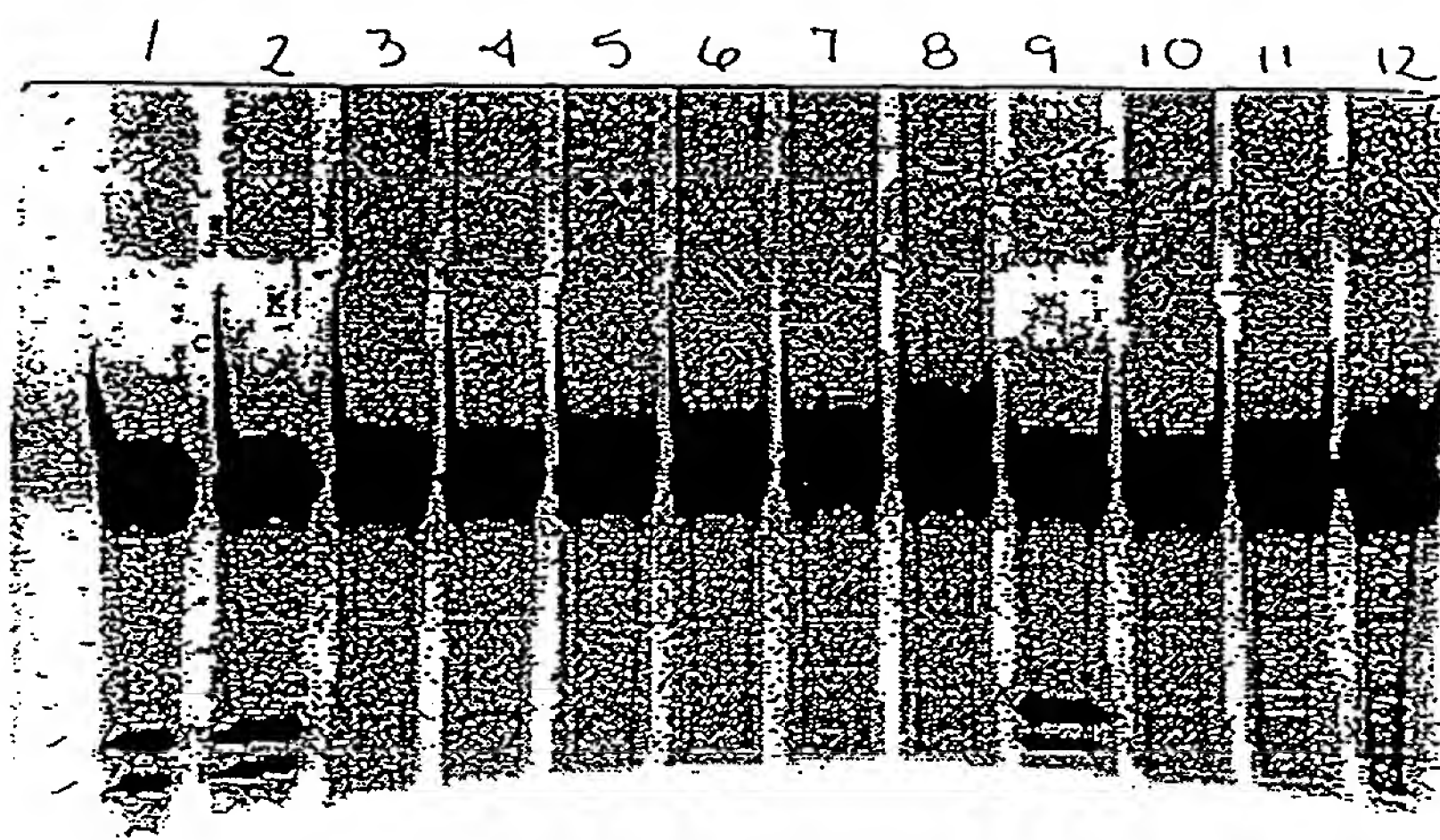


59/127

003007 50378950

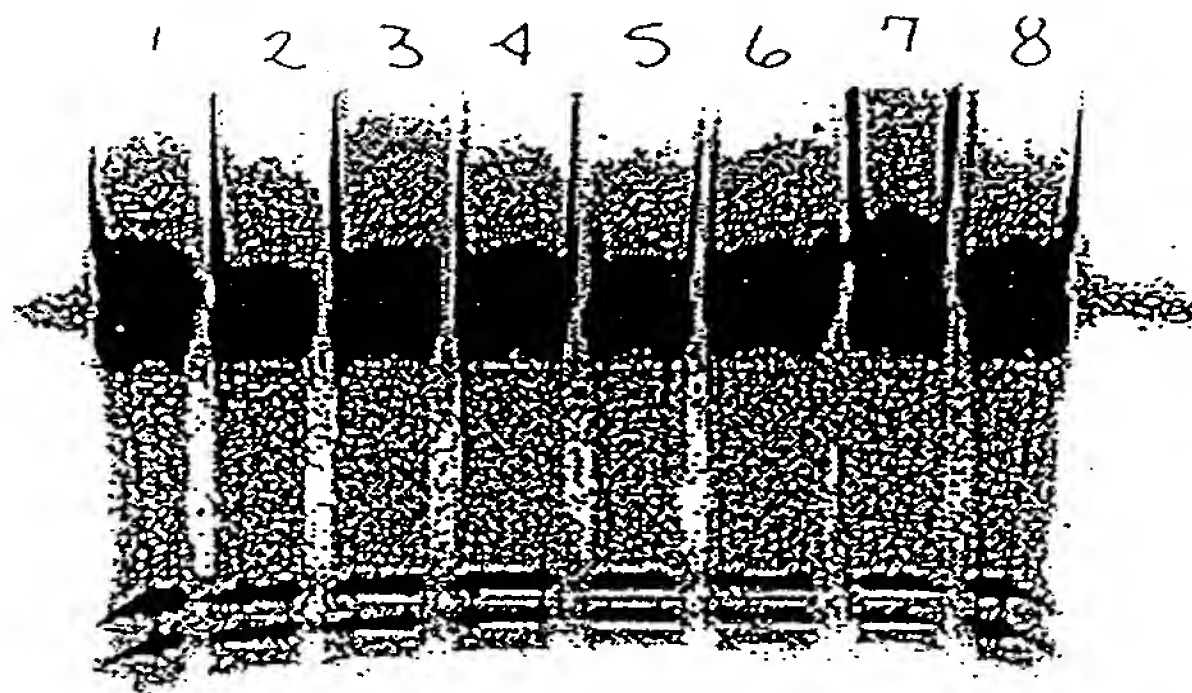
0564305 100600

FIGURE 48



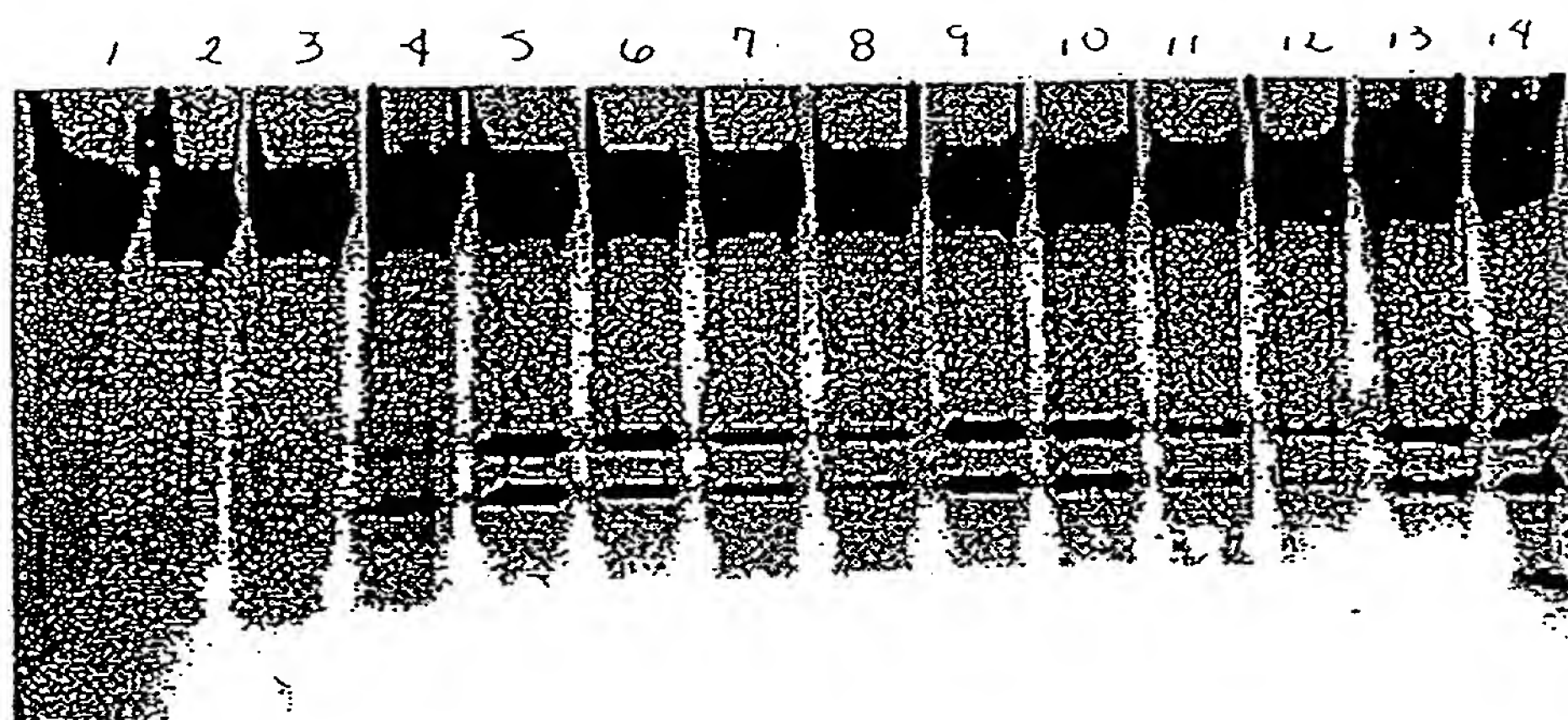
60/127

FIGURE 49



09664305 100000

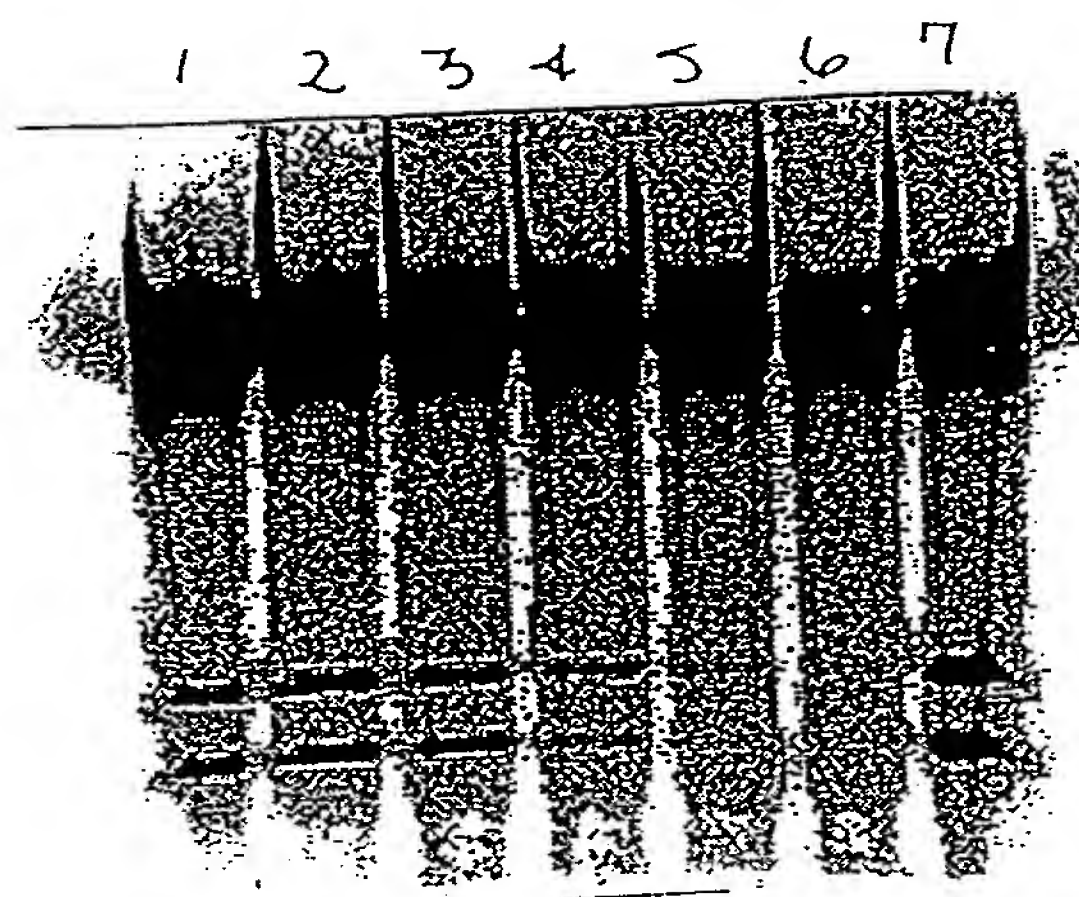
FIGURE 50



009001 50548950

62/127

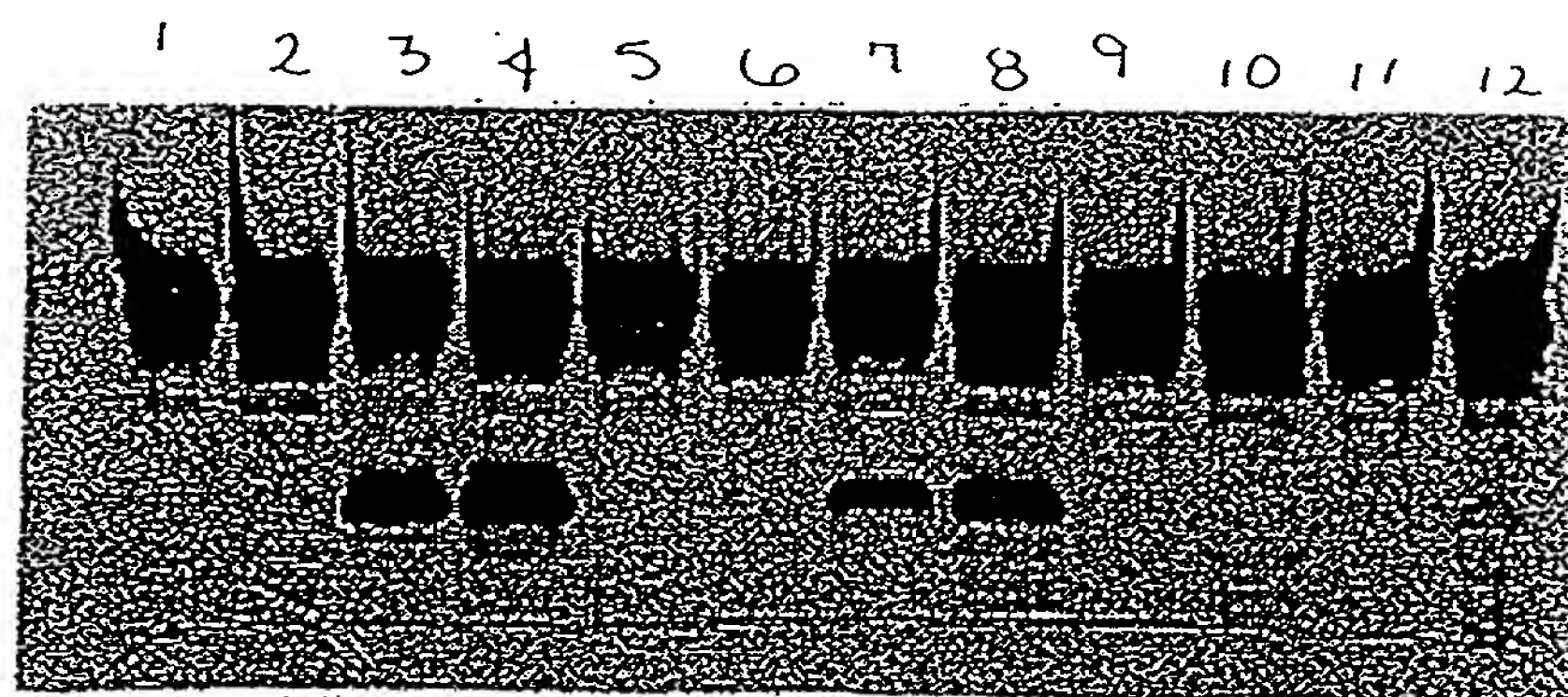
FIGURE 51



09684900 100000

63/127

FIGURE 52

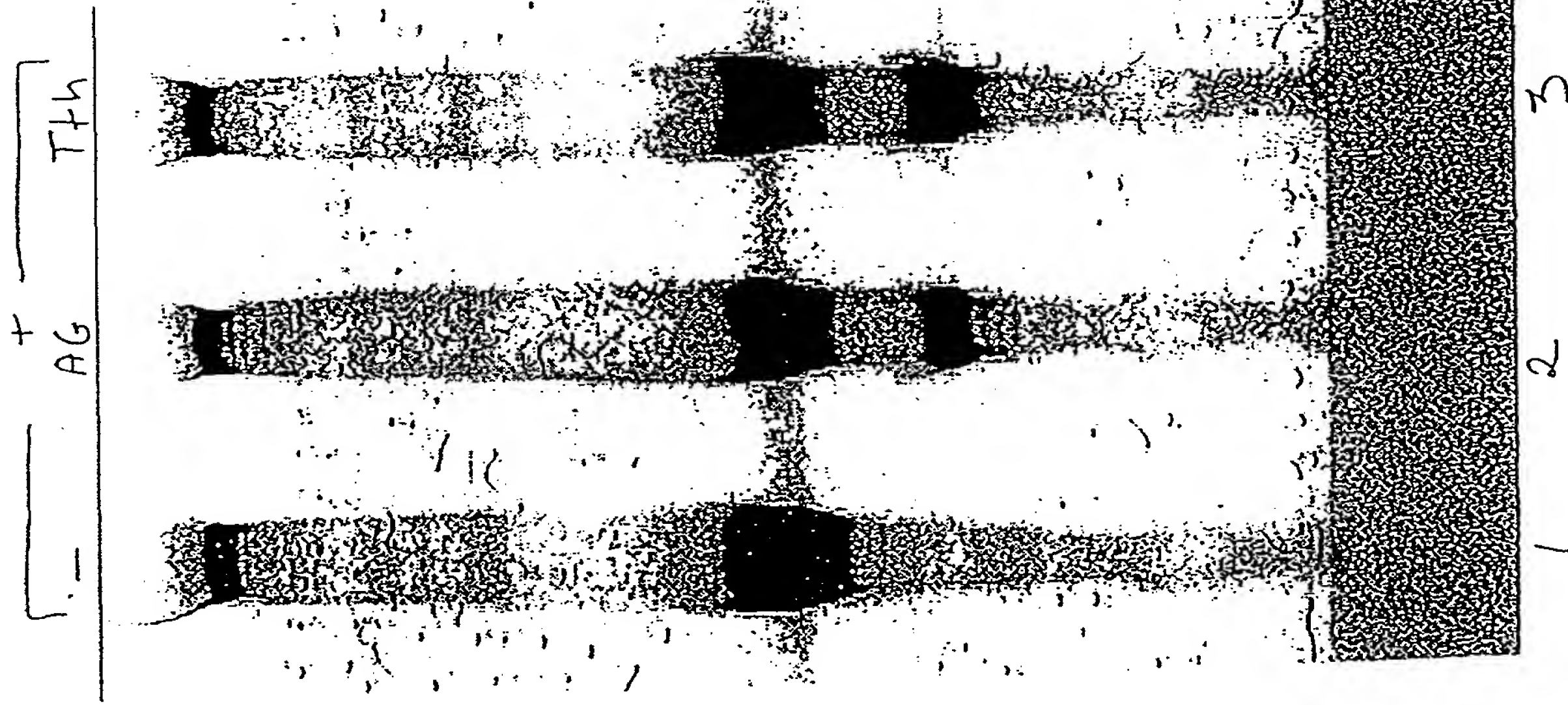


09684305-100000

009007" SE48960

FIGURE 53

a



TARGET RNA →

UNCLEAVED
PROBE →

CLEAVED
PROBE →

65/127

b

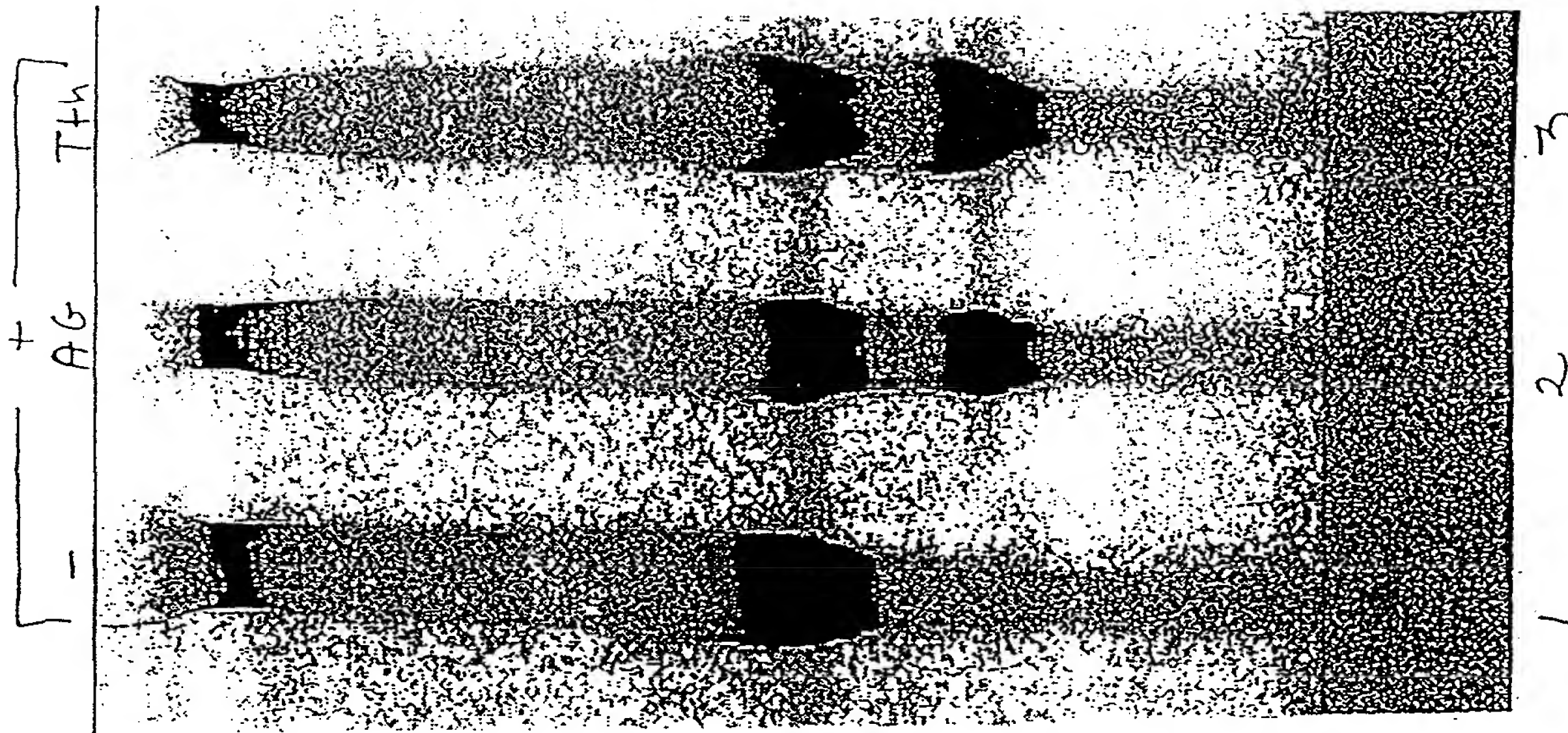
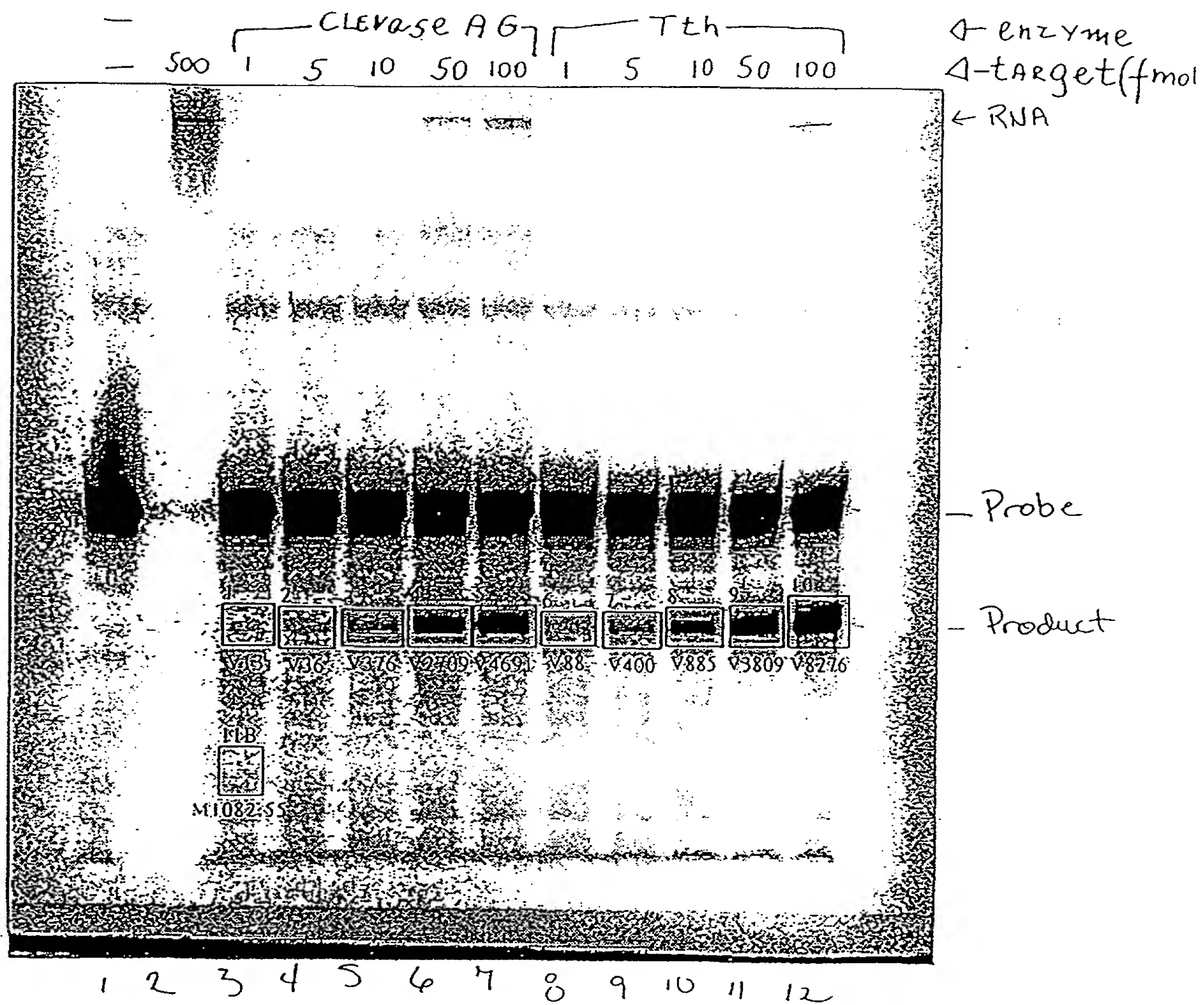
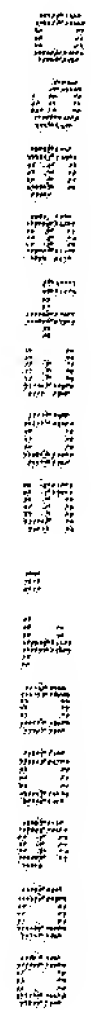


FIGURE 54





67/127

FIGURE 56

70 (C10 aminoT's)

74 (C6 amino T's)

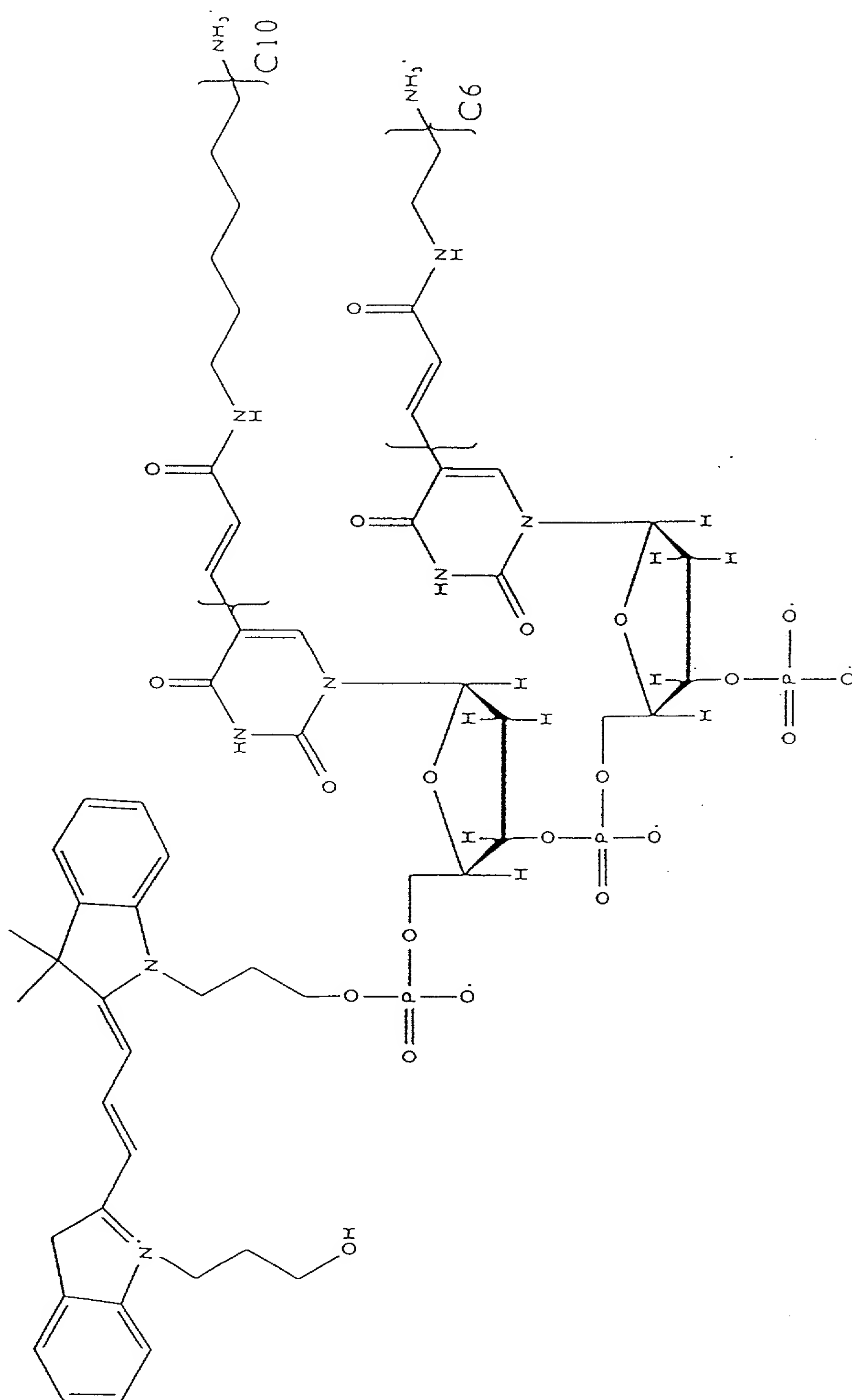
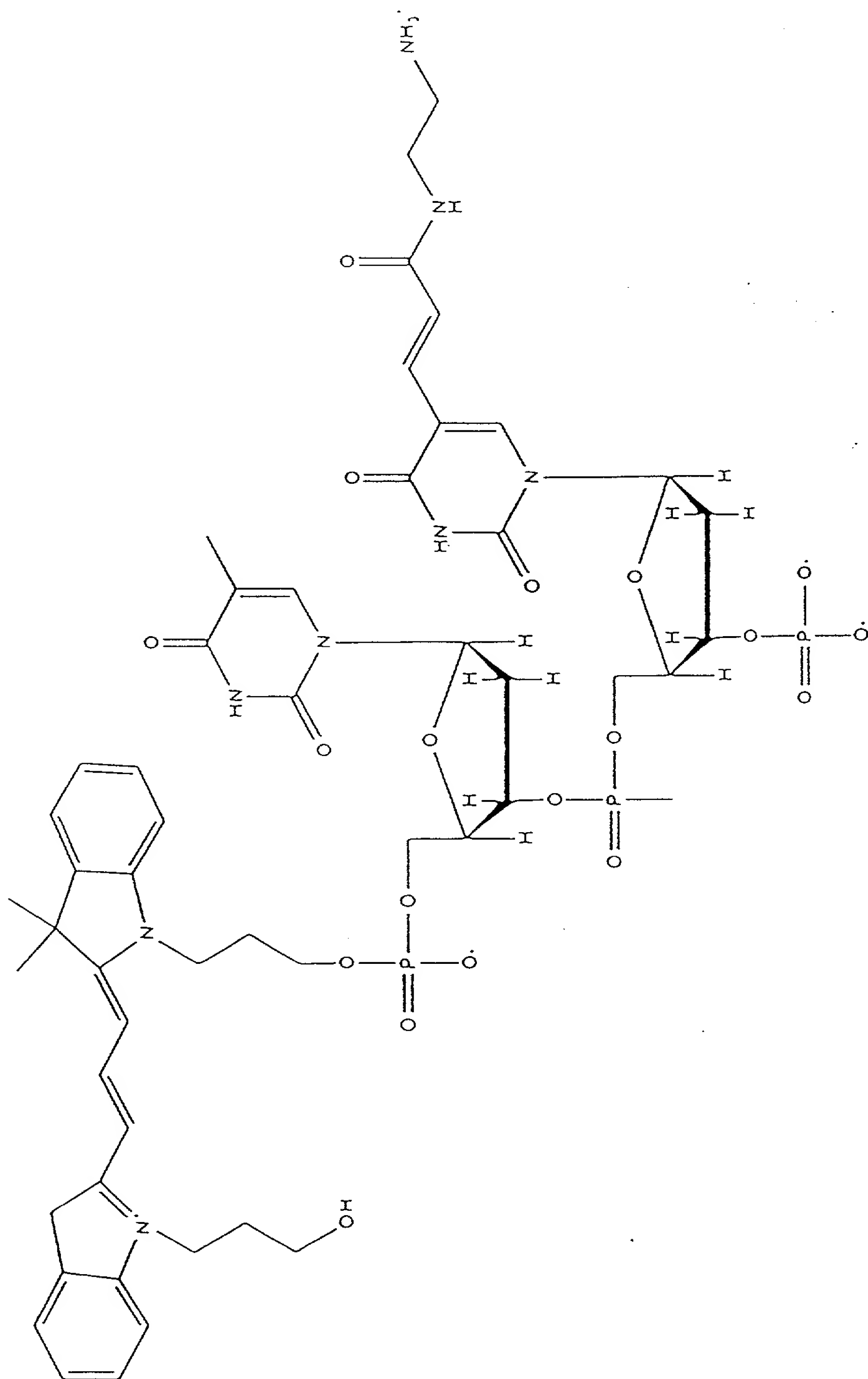
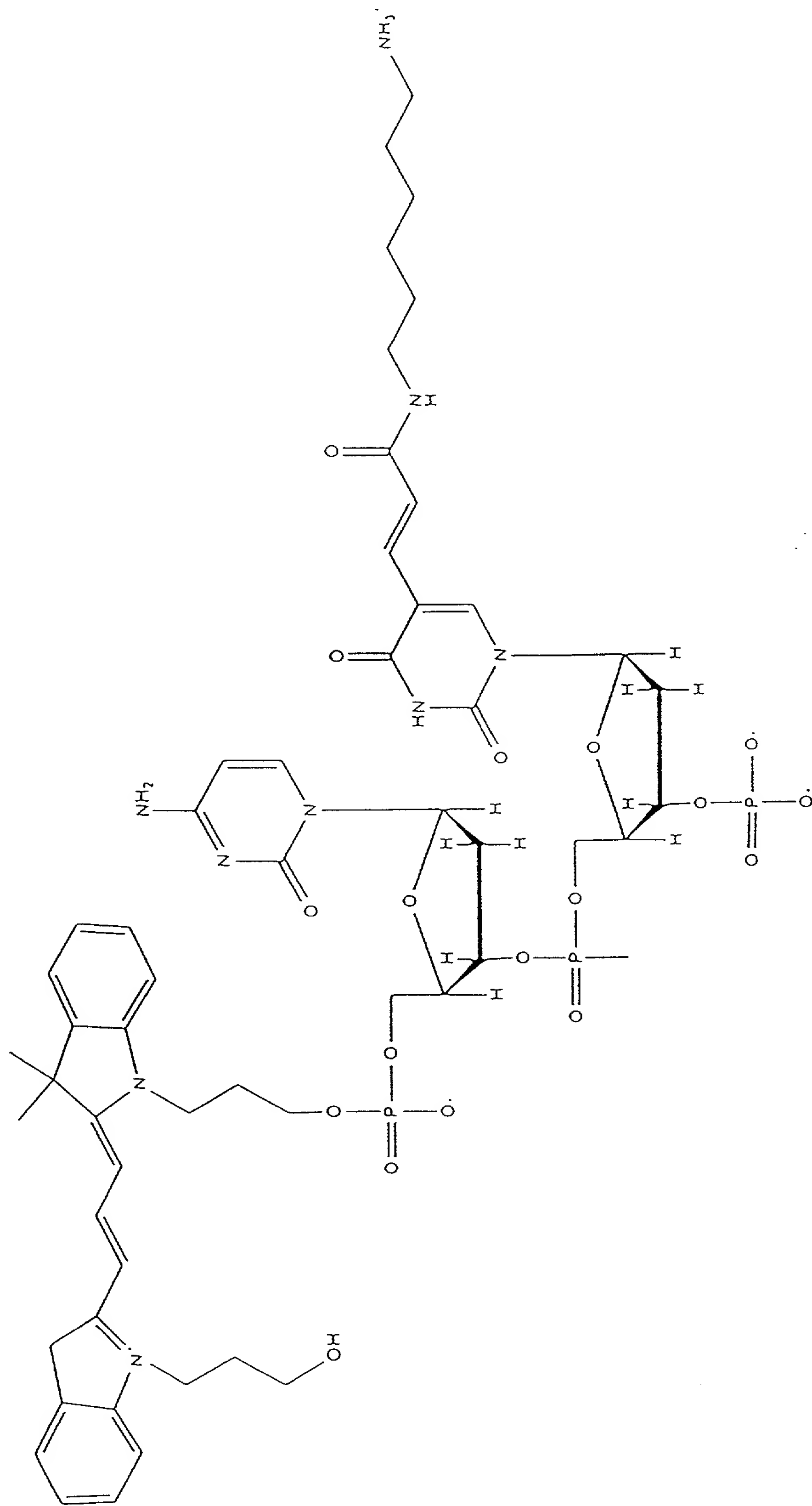


FIGURE 57



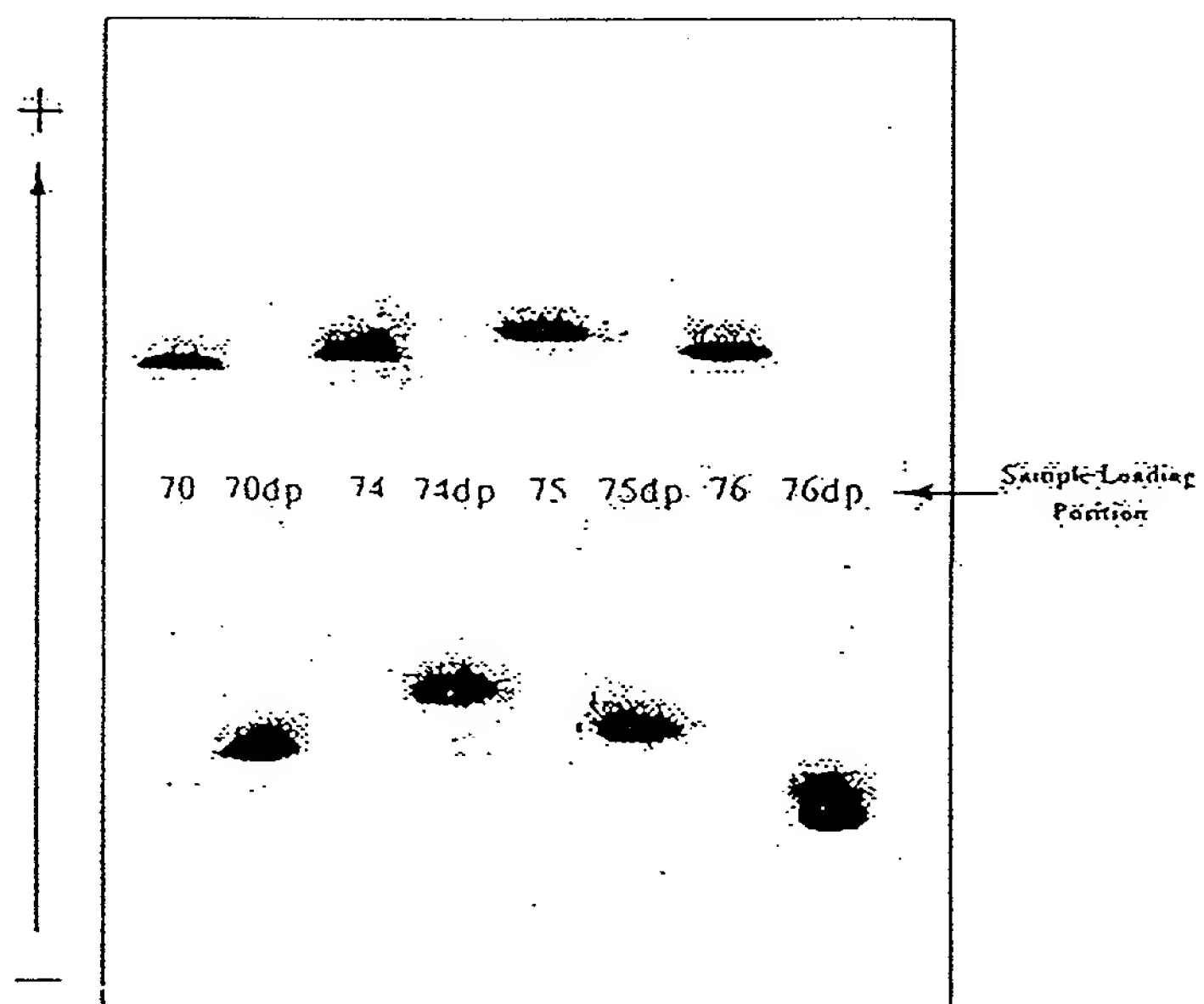
76

FIGURE 58



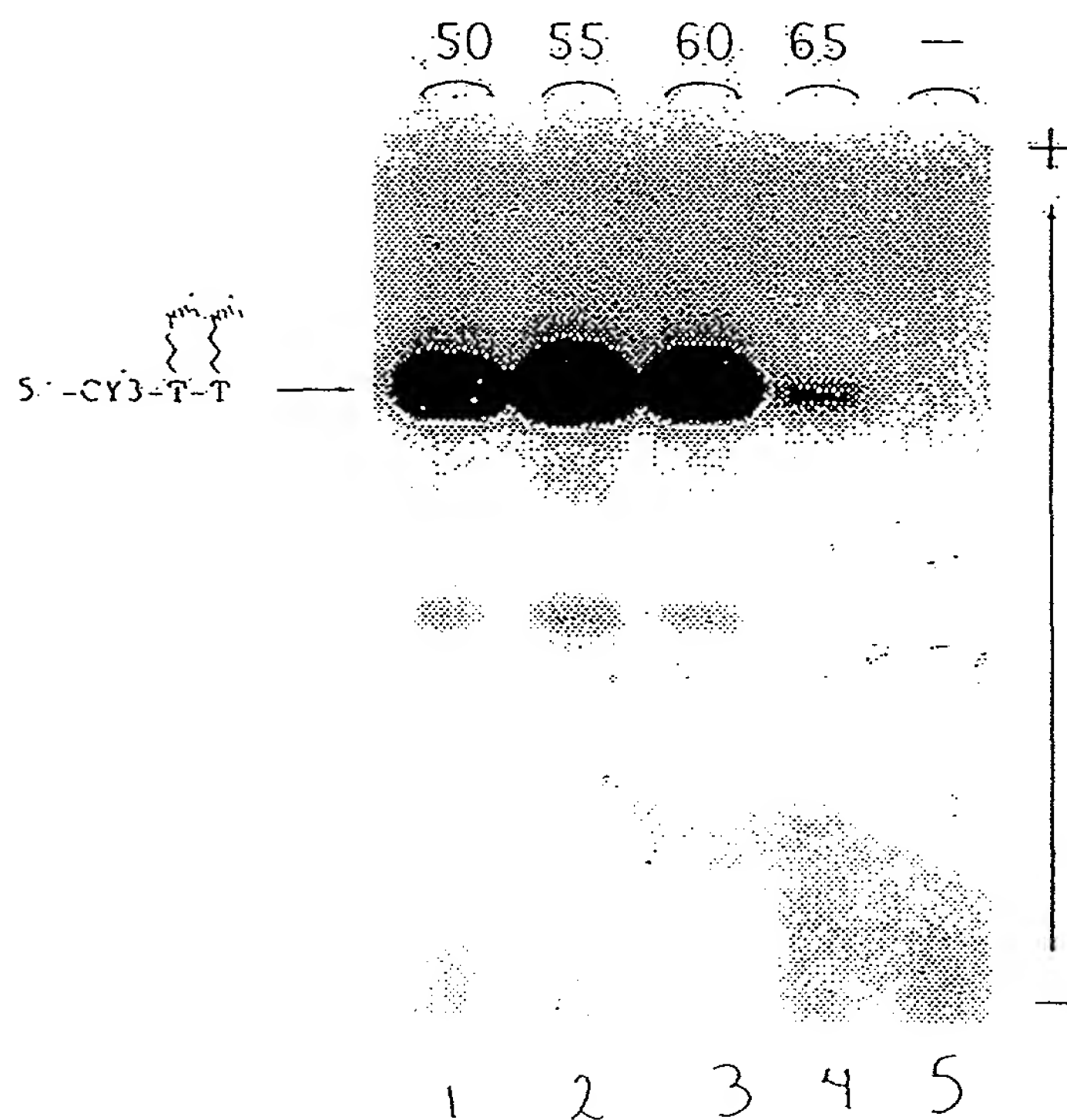
70/127

FIGURE 59



71/127

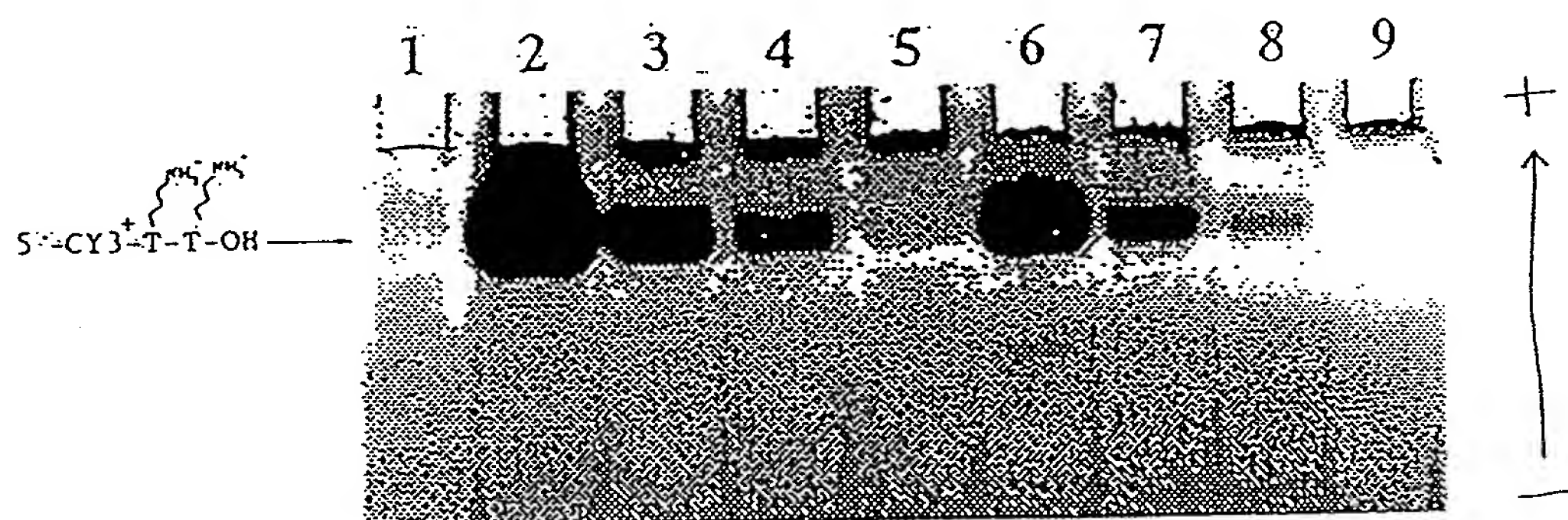
M13 - 3-CGCCAAACGCATAACCCGCGGTCCCACCAAAAAGAAAAGTGGTCGCTCTGCCC-5' 61
 09876543210987654321 123456789
 67 — TATTGGGCGCCAGGGTGGTTTTT



72/127

[illegible]

FIGURE 61



00900T 504850

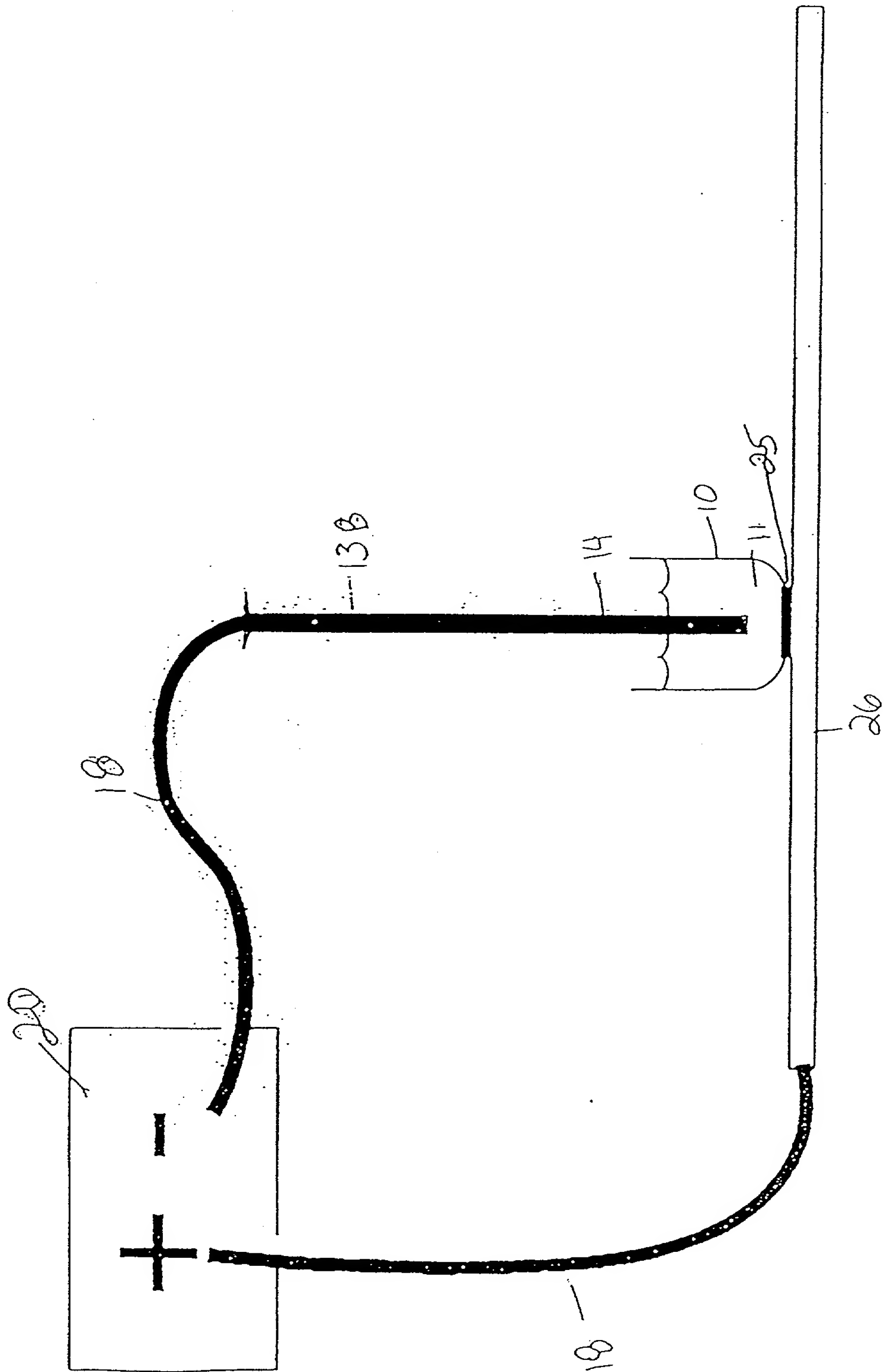
73/127

20



74/127

FIGURE 63



75/127

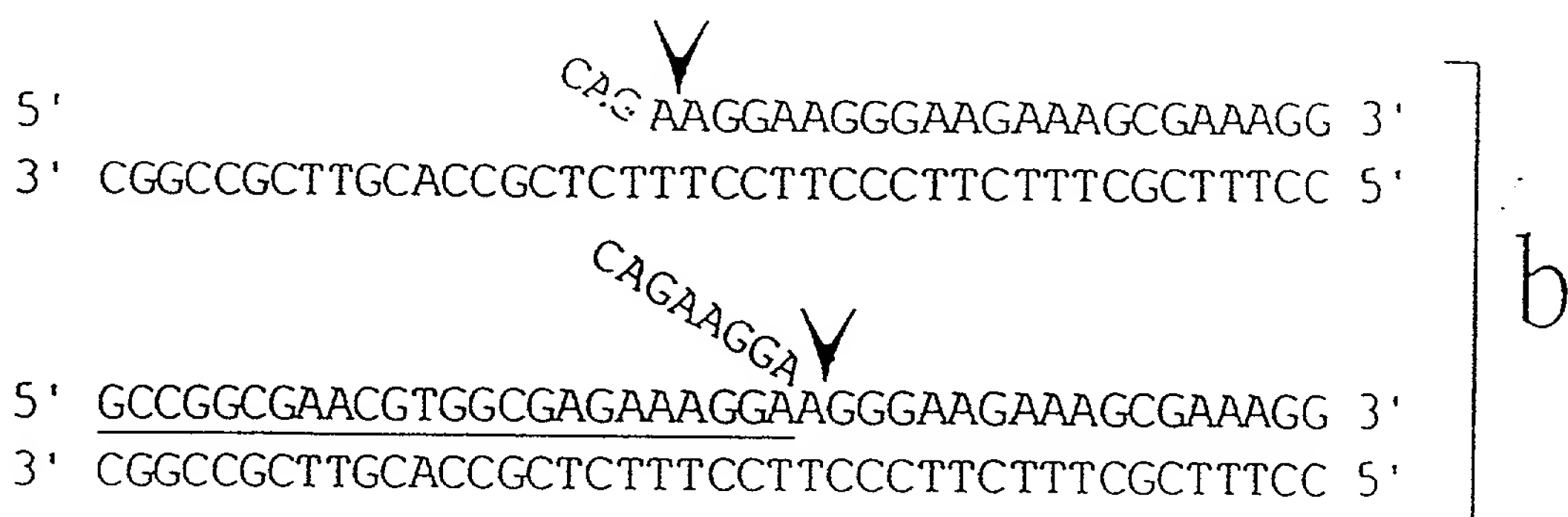
FIGURE 64

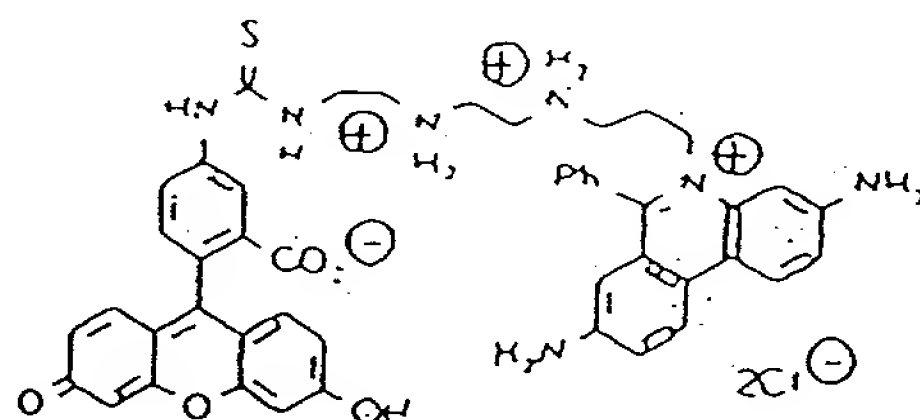
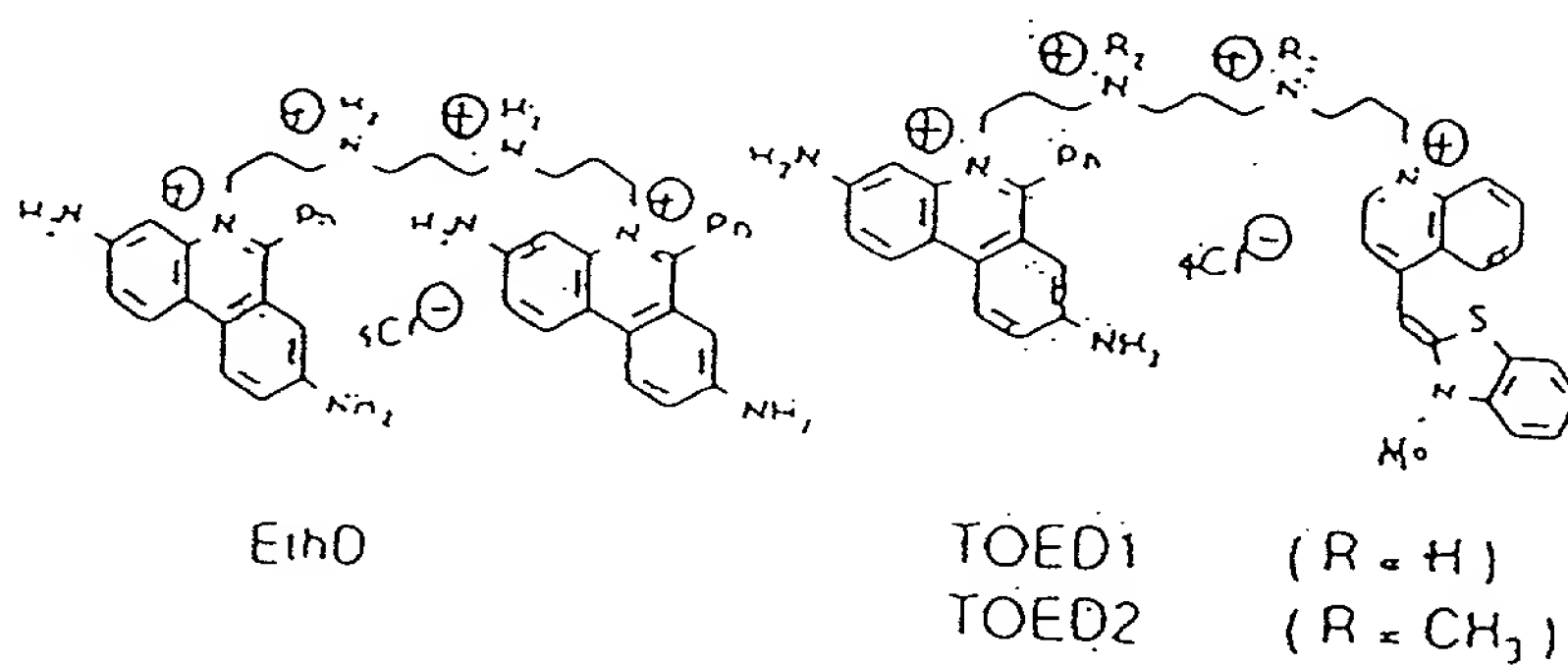
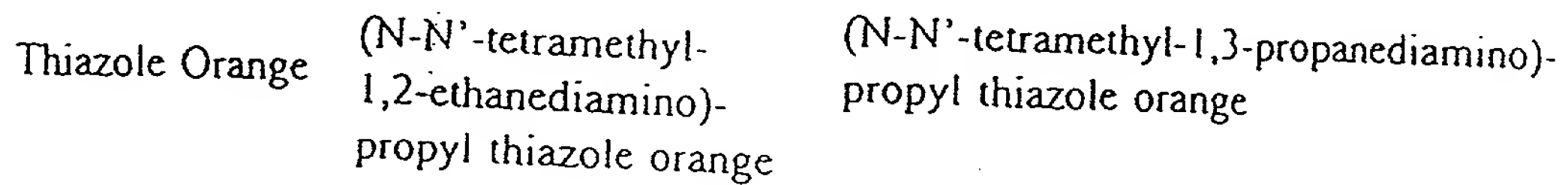
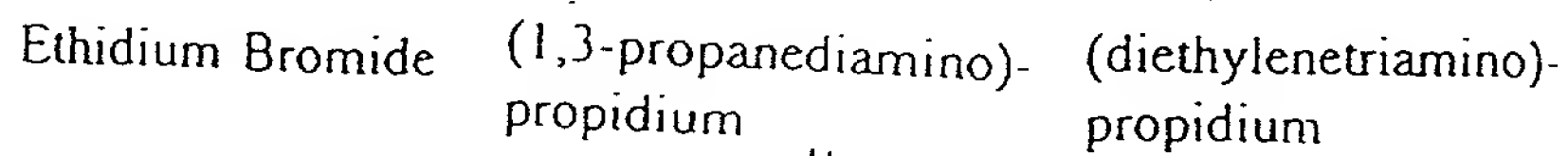


76/127



FIGURE 65



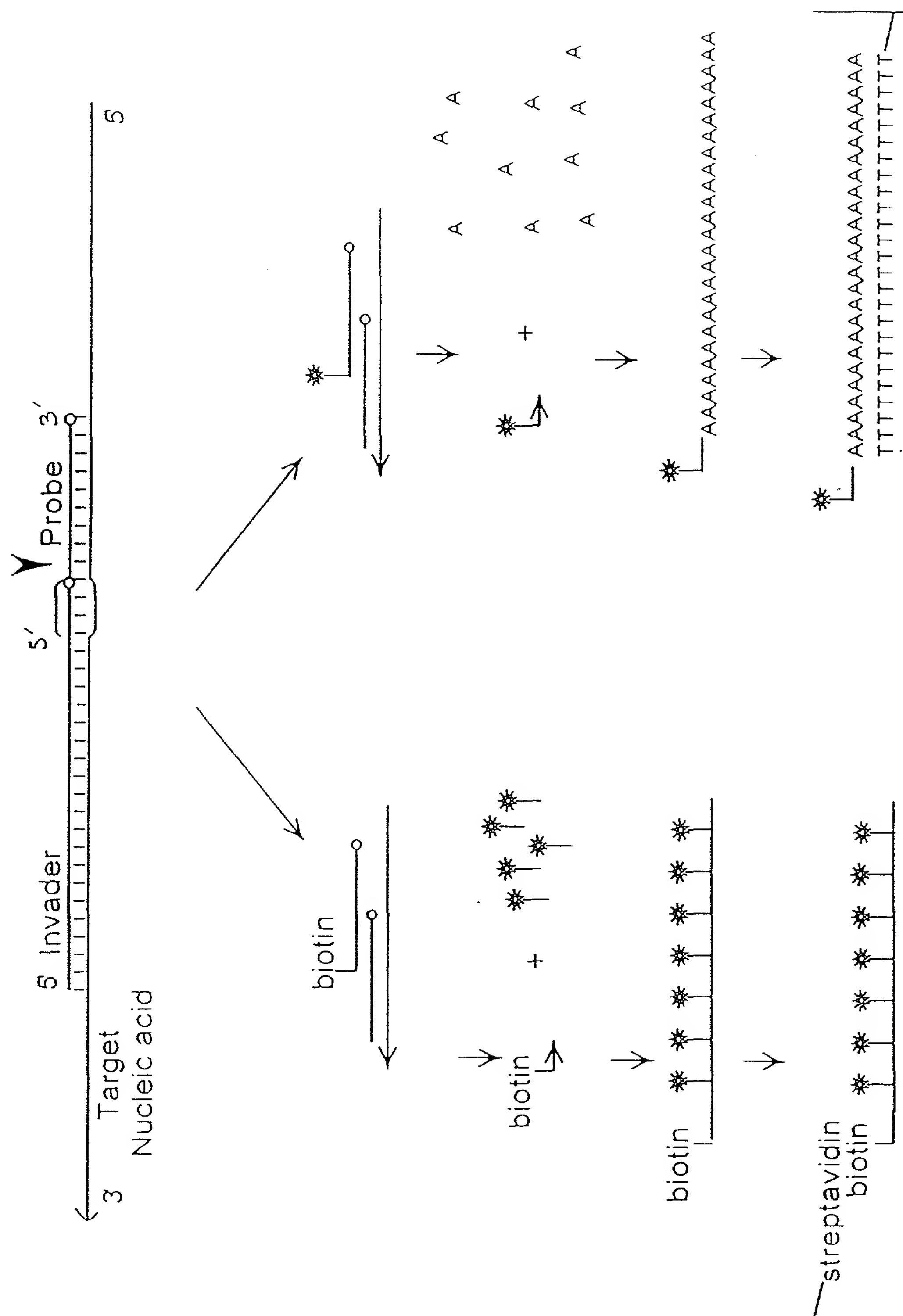


FED

78/127

| | | |
|-----|-----|-----|
| 1 | 1 | 1 |
| 2 | 2 | 2 |
| 3 | 3 | 3 |
| 4 | 4 | 4 |
| 5 | 5 | 5 |
| 6 | 6 | 6 |
| 7 | 7 | 7 |
| 8 | 8 | 8 |
| 9 | 9 | 9 |
| 10 | 10 | 10 |
| 11 | 11 | 11 |
| 12 | 12 | 12 |
| 13 | 13 | 13 |
| 14 | 14 | 14 |
| 15 | 15 | 15 |
| 16 | 16 | 16 |
| 17 | 17 | 17 |
| 18 | 18 | 18 |
| 19 | 19 | 19 |
| 20 | 20 | 20 |
| 21 | 21 | 21 |
| 22 | 22 | 22 |
| 23 | 23 | 23 |
| 24 | 24 | 24 |
| 25 | 25 | 25 |
| 26 | 26 | 26 |
| 27 | 27 | 27 |
| 28 | 28 | 28 |
| 29 | 29 | 29 |
| 30 | 30 | 30 |
| 31 | 31 | 31 |
| 32 | 32 | 32 |
| 33 | 33 | 33 |
| 34 | 34 | 34 |
| 35 | 35 | 35 |
| 36 | 36 | 36 |
| 37 | 37 | 37 |
| 38 | 38 | 38 |
| 39 | 39 | 39 |
| 40 | 40 | 40 |
| 41 | 41 | 41 |
| 42 | 42 | 42 |
| 43 | 43 | 43 |
| 44 | 44 | 44 |
| 45 | 45 | 45 |
| 46 | 46 | 46 |
| 47 | 47 | 47 |
| 48 | 48 | 48 |
| 49 | 49 | 49 |
| 50 | 50 | 50 |
| 51 | 51 | 51 |
| 52 | 52 | 52 |
| 53 | 53 | 53 |
| 54 | 54 | 54 |
| 55 | 55 | 55 |
| 56 | 56 | 56 |
| 57 | 57 | 57 |
| 58 | 58 | 58 |
| 59 | 59 | 59 |
| 60 | 60 | 60 |
| 61 | 61 | 61 |
| 62 | 62 | 62 |
| 63 | 63 | 63 |
| 64 | 64 | 64 |
| 65 | 65 | 65 |
| 66 | 66 | 66 |
| 67 | 67 | 67 |
| 68 | 68 | 68 |
| 69 | 69 | 69 |
| 70 | 70 | 70 |
| 71 | 71 | 71 |
| 72 | 72 | 72 |
| 73 | 73 | 73 |
| 74 | 74 | 74 |
| 75 | 75 | 75 |
| 76 | 76 | 76 |
| 77 | 77 | 77 |
| 78 | 78 | 78 |
| 79 | 79 | 79 |
| 80 | 80 | 80 |
| 81 | 81 | 81 |
| 82 | 82 | 82 |
| 83 | 83 | 83 |
| 84 | 84 | 84 |
| 85 | 85 | 85 |
| 86 | 86 | 86 |
| 87 | 87 | 87 |
| 88 | 88 | 88 |
| 89 | 89 | 89 |
| 90 | 90 | 90 |
| 91 | 91 | 91 |
| 92 | 92 | 92 |
| 93 | 93 | 93 |
| 94 | 94 | 94 |
| 95 | 95 | 95 |
| 96 | 96 | 96 |
| 97 | 97 | 97 |
| 98 | 98 | 98 |
| 99 | 99 | 99 |
| 100 | 100 | 100 |

FIGURE 67



00001 604250

FIGURE 68

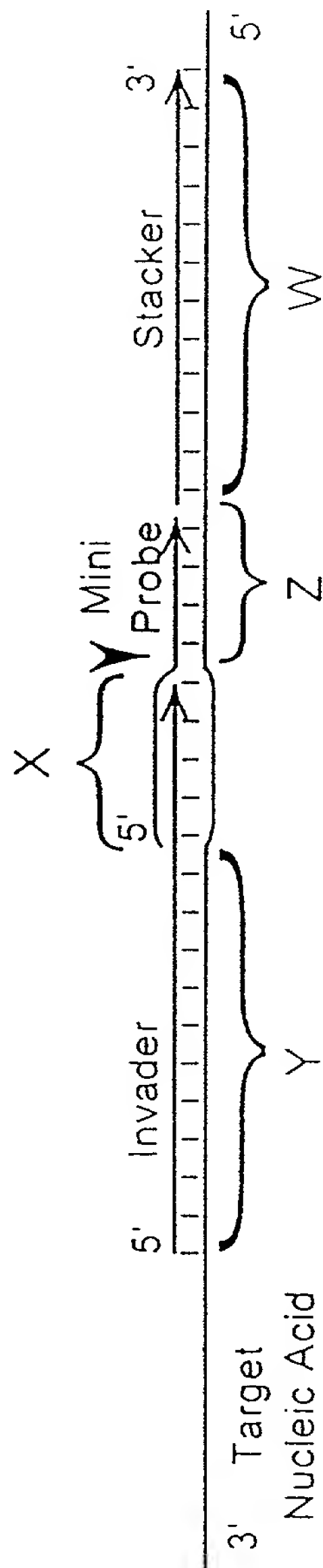
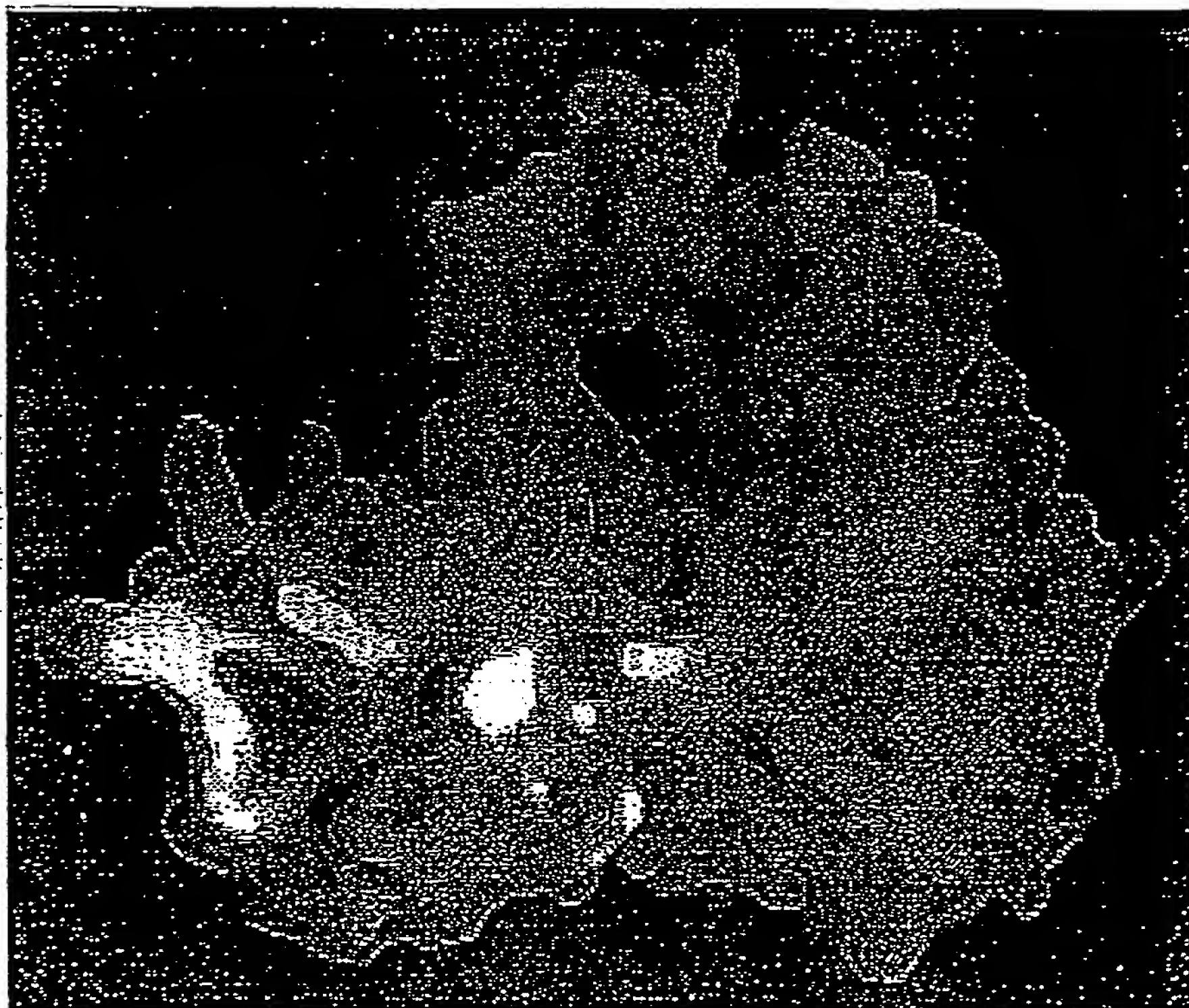




FIGURE 69



00300T 5064305 100600

AMERICAN SOCIETY OF MECHANICAL ENGINEERS
1100 17th Street, N.W., Washington, D.C. 20036
Phone: (202) 295-6241
Fax: (202) 295-6242
E-mail: info@asme.org
Web: <http://www.asme.org>

82/127

| Year | 1990 | 1995 | 2000 | 2005 | 2010 | 2015 | 2020 |
|------|------|------|------|------|------|------|------|
| 1990 | 80 | 90 | 100 | 110 | 120 | 130 | 140 |

| | | | |
|---|---|----------|-----|
| 4 | KT\|H\|L\|E\|N\|D\|I\|T\|P\|I\|W\|F\|D\|G\|E\|P\|P\|K\|L\|K\|E\|K\|T\|R\|K\|V\|R\|R\|E\|M\|K\|E\|A\|E\|L\|K\|M\|K\|E\|A\|I\|K\|K\|---E\|D\|F\|E\|E\|A\|A\|K\|Y\|A\|K\|R\|V\|S\|Y\|L\|T\|P\| | MJAFEN1 | PRO |
| 4 | RT\|I\|N\|L\|ME\|A\|G\|I\|K\|P\|V\|Y\|V\|F\|D\|G\|E\|P\|P\|E\|F\|K\|K\|K\|E\|L\|E\|K\|R\|R\|E\|A\|R\|E\|E\|A\|E\|E\|K\|W\|R\|E\|A\|L\|E\|K\|---G\|E\|I\|E\|E\|A\|R\|K\|Y\|A\|O\|R\|A\|T\|R\|V\|N\|E\| | PFUFEN1 | PRO |
| 0 | RT\|I\|R\|M\|M\|E\|N\|G\|I\|K\|P\|V\|Y\|V\|F\|D\|G\|K\|P\|P\|O\|L\|K\|S\|G\|E\|L\|A\|K\|R\|S\|E\|R\|R\|A\|E\|A\|E\|K\|O\|O\|A\|O\|A\|A\|---G\|A\|E\|O\|E\|V\|E\|K\|F\|T\|K\|R\|L\|V\|K\|V\|T\|K\| | HUMFEN1 | PRO |
| 9 | RT\|I\|R\|M\|-\|E\|N\|G\|I\|K\|P\|V\|Y\|V\|F\|D\|G\|K\|P\|P\|O\|L\|K\|S\|G\|E\|L\|A\|K\|R\|S\|E\|R\|R\|A\|E\|A\|E\|K\|O\|O\|A\|O\|E\|A\|---G\|M\|E\|E\|E\|V\|E\|K\|F\|T\|K\|R\|L\|V\|K\|V\|T\|K\| | MUSFEN1 | PRO |
| 1 | RT\|L\|R\|M\|I\|D\|N\|G\|I\|K\|P\|C\|Y\|V\|F\|D\|G\|K\|P\|P\|O\|L\|K\|S\|H\|E\|L\|T\|K\|R\|S\|R\|R\|V\|E\|T\|E\|K\|K\|L\|A\|---E\|A\|---T\|T\|E\|L\|E\|K\|M\|K\|O\|E\|R\|R\|L\|V\|K\|V\|S\|K\| | YST510 | PRO |
| 1 | R\|I\|C\|K\|L\|L\|Y\|F\|G\|I\|R\|P\|V\|F\|D\|G\|G\|V\|P\|V\|L\|K\|R\|E\|T\|I\|R\|O\|R\|K\|E\|R\|R\|O\|G\|K\|R\|E\|S\|A\|K\|S\|T\|A\|R\|K\|L\|L\|A\|L\|O\|N\|G\|S\|N\|D\|N\|K\|R\|D\|S\|D\|E\|V\|T\|M\| | YSTRAD2 | PRO |
| 1 | R\|I\|C\|K\|L\|L\|F\|F\|G\|I\|K\|P\|V\|F\|D\|G\|G\|A\|P\|S\|L\|K\|R\|O\|T\|I\|O\|K\|R\|O\|A\|R\|R\|L\|D\|R\|E\|E\|N\|A\|T\|V\|T\|A\|N\|K\|L\|L\|A\|O\|M\|R\|H\|O\|A\|M\|L\|L\|K\|R\|D\|A\|D\|E\|V\|T\|O\| | SPORAD13 | PRO |
| 1 | R\|L\|C\|K\|L\|L\|F\|F\|R\|I\|R\|P\|I\|F\|V\|F\|D\|G\|D\|A\|P\|L\|L\|K\|K\|O\|T\|L\|V\|K\|R\|R\|O\|R\|K\|O\|L\|A\|S\|D\|S\|R\|K\|T\|T\|E\|K\|L\|L\|K\|T\|F\|L\|K\|R\|O\|A\|I\|K\|T\|E\|R\|I\|A\|A\|T\|V\|T\|G\| | HUMXPG | PRO |
| 1 | R\|L\|C\|K\|L\|L\|F\|F\|R\|I\|R\|P\|I\|F\|V\|F\|D\|G\|D\|A\|P\|L\|L\|K\|K\|O\|T\|L\|A\|K\|R\|R\|O\|R\|K\|O\|S\|A\|I\|D\|S\|R\|K\|T\|T\|E\|K\|L\|L\|K\|T\|F\|L\|K\|R\|O\|A\|L\|K\|T\|O\|R\|I\|A\|A\|S\|V\|T\|G\| | MUSXPG | PRO |
| 1 | R\|L\|C\|K\|L\|L\|F\|F\|R\|I\|R\|P\|I\|F\|V\|F\|D\|G\|E\|A\|P\|L\|L\|K\|R\|O\|T\|L\|A\|K\|R\|R\|O\|R\|T\|D\|K\|A\|S\|N\|D\|A\|R\|K\|T\|N\|E\|K\|L\|L\|R\|T\|F\|L\|K\|R\|O\|A\|I\|K\|A\|E\|R\|I\|A\|A\|T\|V\|T\|G\| | XENXPG | PRO |
| 0 | R\|I\|O\|R\|L\|L\|E\|L\|K\|I\|P\|I\|V\|V\|F\|D\|N\|I\|N\|A\|S\|S\|A\|H\|E\|S\|K\|D\|O\|N\|E\|F\|V\|P\|R\|K\|R\|R\|S\|F\|G\|D\|S\|P\|F\|T\|N\|L\|V\|---\|---\|---\|---\|---\|---\|---\|---\| | CELRAD2 | PRO |

FIGURE 70-C

| | 290 | 300 | 310 | 320 | 330 | 340 | 350 | |
|-----|-----------------------|----------|--------------|----------------|-------------------|--------------|--------------------|-----------------|
| 251 | LKKEVEYYDEIKRIFKEPKV | ---- | ---- | ---- | TD--NYSLSLKLPDKEG | IKFLVDENDFN | YD MJAFEN1 PRO | |
| 265 | OKOSVDLYAIKEFFLNPPV | ---- | ---- | ---- | TD--NYNLVWRDPDEEG | ILKFLCDEHDF | SEE PFUFEN1 PRO | |
| 269 | PVPENWLHKEAHOLFLEPEV | ---- | ---- | ---- | LDPESELKWSPEPNEEE | ELKFMCGEKOF | SEE HUMFEN1 PRO | |
| 267 | PVPENWLHKEAOOLFLEPEV | ---- | ---- | ---- | VDPESELKWSPEPNEEE | ELVKFMCGEKOF | SEE MUSFEN1 PRO | |
| 272 | KIPEDWPYKOAARMLFLOPEV | ---- | ---- | ---- | IDGNEINLKWSPPKKE | LEYLCCDKKF | SEE YST510 PRO | |
| 265 | OETENKFEKDLRKKLVNNE | ILDDFP | SVMVYDAYMRPE | VOHDTTPFVWGV | PDLM | LSFMTOLGWP | HE YSTRAD2 PRO | |
| 268 | KNDVNTPVKKRINKLVGK | -ILPSEFP | NPLVDEAYLHPA | VDDSKOSFOWG | IPDLDELRO | FLMATV | GWSKO SPORAD13 PRO | |
| 268 | KIRPNPHDTKVKKKL | -RTL | OLTPGF | PNPAVAEAYLKP | VDDSKGSFLW | GKPDLDK | IREFCORYFGW | NRT HUMXPG PRO |
| 268 | KVAENPYDTKVKKKL | -RK | LOLTPGF | PNPAVADAYLR | PVDDSRGSFLW | GKPDVDK | IREFCORYFGW | NRM MUSXPG PRO |
| 268 | KMRPNPNDTKVKKKL | -RL | DL | OOSFPNPAVASAYL | KPVVDESKSAF | SWGRPDLEO | IREFCESRFGW | YRL XENXPG PRO |
| 194 | -----EKKVSRPHL | ISTAIL | LGCDYFORGV | ONIGIVSVFD | -ILGEFGDDG | NEEIDPHV | ILDRFASV | VRE CELRAD2 PRO |

84/127

| | 360 | 370 | 380 | 390 | 400 | 410 | 420 |
|-----|------------------|------------|-----------|---------------|-------------|-------------|----------------------|
| 300 | RVKKHVDKLYNLIA | ---- | ---- | ---- | ---- | ---- | ---- |
| 314 | RVKNGLERLKKAI | ---- | ---- | ---- | ---- | ---- | ---- |
| 320 | RIRSGVKRLSKSROGS | -TOGR | LDDFFKVT | ---- | ---- | ---- | ---- |
| 318 | RIRSGVKRLSKSROGS | -TOGR | LDDFFKVT | ---- | ---- | ---- | ---- |
| 323 | RVKSGISRLKKGLKSG | -IOGR | LDDGFFOVV | ---- | ---- | ---- | ---- |
| 335 | KSDEILIP | LRDVNKRKK | ---- | ---- | ---- | ---- | ---- |
| 337 | RTNEVLLPV | IODMHKKOF | ---- | ---- | ---- | ---- | ---- |
| 336 | KTDES | LPVLKOLDAO | OTOLRIDS | FFRLAOOEKEDAK | RIKSORLNRA | VTCLMLRKEKE | AAASEIEAVSVAM |
| 336 | KTDES | LPVLKHLNAH | OTOLRIDS | FFRLAOOEKODAK | LKSHRLSRA | VTCLMLRKEKE | KAPELTKVTEAM |
| 336 | KTDES | LPVLKOLNAO | OTOLRIDS | FFRLAOOEHEAAG | -----LKSORL | RRAVTCMKRKE | ROVEAAVAVM |
| 257 | EIPARSED | TORKLRLRRK | KYNFPVGF | PNCD | AVHNAITMYL | RPPVSSEIPK | IIPR-----AANFOOVAEIM |

MJAFEN1 PRO
PFUFEN1 PRO
HUMFEN1 PRO
MUSFEN1 PRO
YST510 PRO
YSTRAD2 PRO
SPORAD13 PRO
HUMXPG PRO
MUSXPG PRO
XENXPG PRO
CELRAD2 PRO

FIGURE 70-D

| | 430 | 440 | 450 | 460 | 470 | 480 | 490 | |
|-----|---|-----|-----|-----|-----|-----|------|--------------|
| 114 | --- | --- | --- | --- | --- | --- | --- | MJAFEN1 PRO |
| 127 | --- | --- | --- | --- | --- | --- | --- | PFUFEN1 PRO |
| 148 | --- | --- | --- | --- | --- | --- | GSL | HUMFEN1 PRO |
| 146 | --- | --- | --- | --- | --- | --- | GSL | MUSFEN1 PRO |
| 151 | --- | --- | --- | --- | --- | --- | PK-T | YST510 PRO |
| 157 | KRINEFF | --- | --- | --- | --- | --- | --- | YSTRAD2 PRO |
| 159 | SNLTOFFEGGNTNVYAPRVAYHFKSKRLENALSSFKNOISNOSPMSEEIQADADAFGESKGSDELOSRL | --- | --- | --- | --- | --- | --- | SPORAD13 PRO |
| 106 | EKEFELLDKAKRKTOKRGITNTLEESSLKRKRLSDSKRKNTCCGFLGETCLSESSDGSSEHAESSLM | --- | --- | --- | --- | --- | --- | HUMXPG PRO |
| 106 | EKEFELLDKAKGKTOKREL PYK | --- | --- | --- | --- | --- | --- | MUSXPG PRO |
| 103 | ERECTNORKGOKTNTKS | --- | --- | --- | --- | --- | --- | XENXPG PRO |
| 122 | MKECGWPATRTOKELALSIRRKVHLTTTVAQTRIPDFFAATKSKNFTPIVEPCESLEOYISANN | --- | --- | --- | --- | --- | --- | CELRAD2 PRO |

8/21/58

| | 500 | 510 | 520 | 530 | 540 | 550 | 560 | |
|-----|--|-----|-----|-----|-----|-----|------------------|--------------|
| 14 | --- | --- | --- | --- | --- | --- | NKTKOKTL | MJAFEN1 PRO |
| 27 | --- | --- | --- | --- | --- | --- | KSGKOSTL | PFUFEN1 PRO |
| 152 | SAKRKEPEPKGST | --- | --- | --- | --- | --- | KKKAKTGAAG | HUMFEN1 PRO |
| 150 | SAKRKEPEPKGPA | --- | --- | --- | --- | --- | KKKAKTGGAG | MUSFEN1 PRO |
| 154 | KEOLAAAKRAOE | --- | --- | --- | --- | --- | NKKLNKNK | YST510 PRO |
| 164 | --- | --- | --- | --- | --- | --- | --- | YSTRAD2 PRO |
| 29 | RRKKMMASKNSSDSDSEDNFLASLTPKTNSSSISLENLPRKTKLSTLL | --- | --- | --- | --- | --- | --- | SPORAD13 PRO |
| 76 | NVORRTAAKEPKTSASDSONSVKEAPVKNGGATTSSSDSDDDGGKEKMLVLTARSVFGKKRRKLRARG | --- | --- | --- | --- | --- | --- | HUMXPG PRO |
| 69 | SARORSAEESKIGCSDVPDLVRDSPHGRGCVSTSSDSEDGEDKAKTVLVTARPVFGKKRRKLSMK | --- | --- | --- | --- | --- | --- | MUSXPG PRO |
| 158 | --- | --- | --- | --- | --- | --- | --- | XENXPG PRO |
| 187 | WMRKRKRSESP0ILOHAKROVPDRK | --- | --- | --- | --- | --- | RSVKIRAFKPYPTDVI | CELRAD2 PRO |



1. The first part of the document is a letter from the President of the United States to the Congress, dated January 1, 1801. It is a message of peace and goodwill, and it is signed by James Madison.

2. The second part of the document is a report from the Secretary of the Navy, dated January 1, 1801. It is a report on the state of the Navy, and it is signed by John Adams.

3. The third part of the document is a report from the Secretary of the Treasury, dated January 1, 1801. It is a report on the state of the Treasury, and it is signed by Alexander Hamilton.

4. The fourth part of the document is a report from the Secretary of the War, dated January 1, 1801. It is a report on the state of the War, and it is signed by Henry Knox.

5. The fifth part of the document is a report from the Secretary of the Interior, dated January 1, 1801. It is a report on the state of the Interior, and it is signed by Thomas Mifflin.

6. The sixth part of the document is a report from the Secretary of the Education, dated January 1, 1801. It is a report on the state of the Education, and it is signed by John Adams.

7. The seventh part of the document is a report from the Secretary of the Agriculture, dated January 1, 1801. It is a report on the state of the Agriculture, and it is signed by John Adams.

8. The eighth part of the document is a report from the Secretary of the Commerce, dated January 1, 1801. It is a report on the state of the Commerce, and it is signed by John Adams.

9. The ninth part of the document is a report from the Secretary of the Marine, dated January 1, 1801. It is a report on the state of the Marine, and it is signed by John Adams.

10. The tenth part of the document is a report from the Secretary of the Air, dated January 1, 1801. It is a report on the state of the Air, and it is signed by John Adams.

11. The eleventh part of the document is a report from the Secretary of the Land, dated January 1, 1801. It is a report on the state of the Land, and it is signed by John Adams.

12. The twelfth part of the document is a report from the Secretary of the Water, dated January 1, 1801. It is a report on the state of the Water, and it is signed by John Adams.

13. The thirteenth part of the document is a report from the Secretary of the Fire, dated January 1, 1801. It is a report on the state of the Fire, and it is signed by John Adams.

14. The fourteenth part of the document is a report from the Secretary of the Earth, dated January 1, 1801. It is a report on the state of the Earth, and it is signed by John Adams.

15. The fifteenth part of the document is a report from the Secretary of the Sky, dated January 1, 1801. It is a report on the state of the Sky, and it is signed by John Adams.

16. The sixteenth part of the document is a report from the Secretary of the Sun, dated January 1, 1801. It is a report on the state of the Sun, and it is signed by John Adams.

17. The seventeenth part of the document is a report from the Secretary of the Moon, dated January 1, 1801. It is a report on the state of the Moon, and it is signed by John Adams.

18. The eighteenth part of the document is a report from the Secretary of the Stars, dated January 1, 1801. It is a report on the state of the Stars, and it is signed by John Adams.

19. The nineteenth part of the document is a report from the Secretary of the Planets, dated January 1, 1801. It is a report on the state of the Planets, and it is signed by John Adams.

20. The twentieth part of the document is a report from the Secretary of the Universe, dated January 1, 1801. It is a report on the state of the Universe, and it is signed by John Adams.

[illegible]

86/127

MJAFENI PRO
PFUFENI PRO
HUMFENI PRO
MUSFENI PRO
YST510 PRO
YSTRAD2 PRO
SPORAD13 PRO
HUMXPG PRO
MUSXPG PRO
XENXPG PRO
CELRAD2 PRO

FIGURE 71

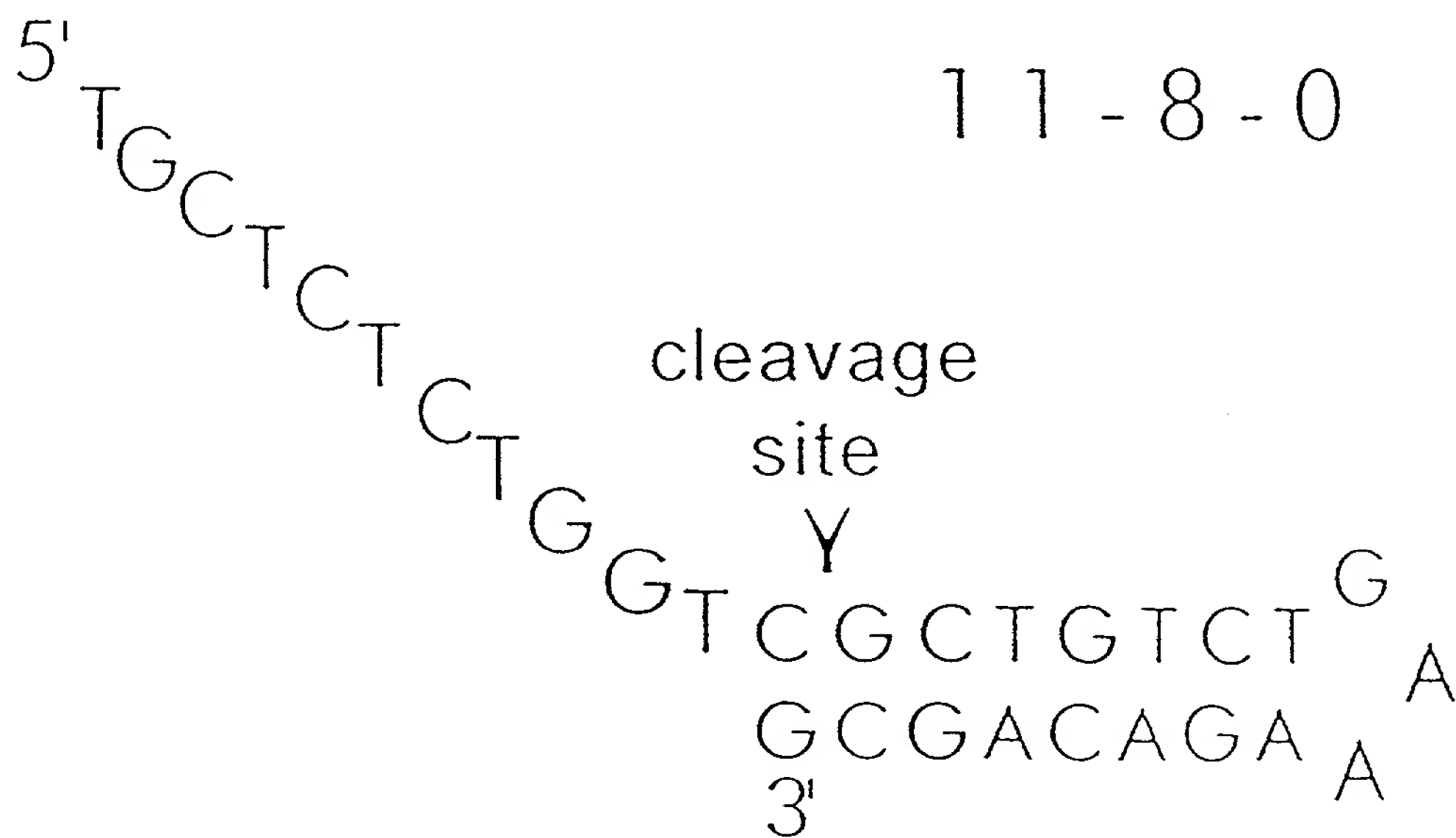
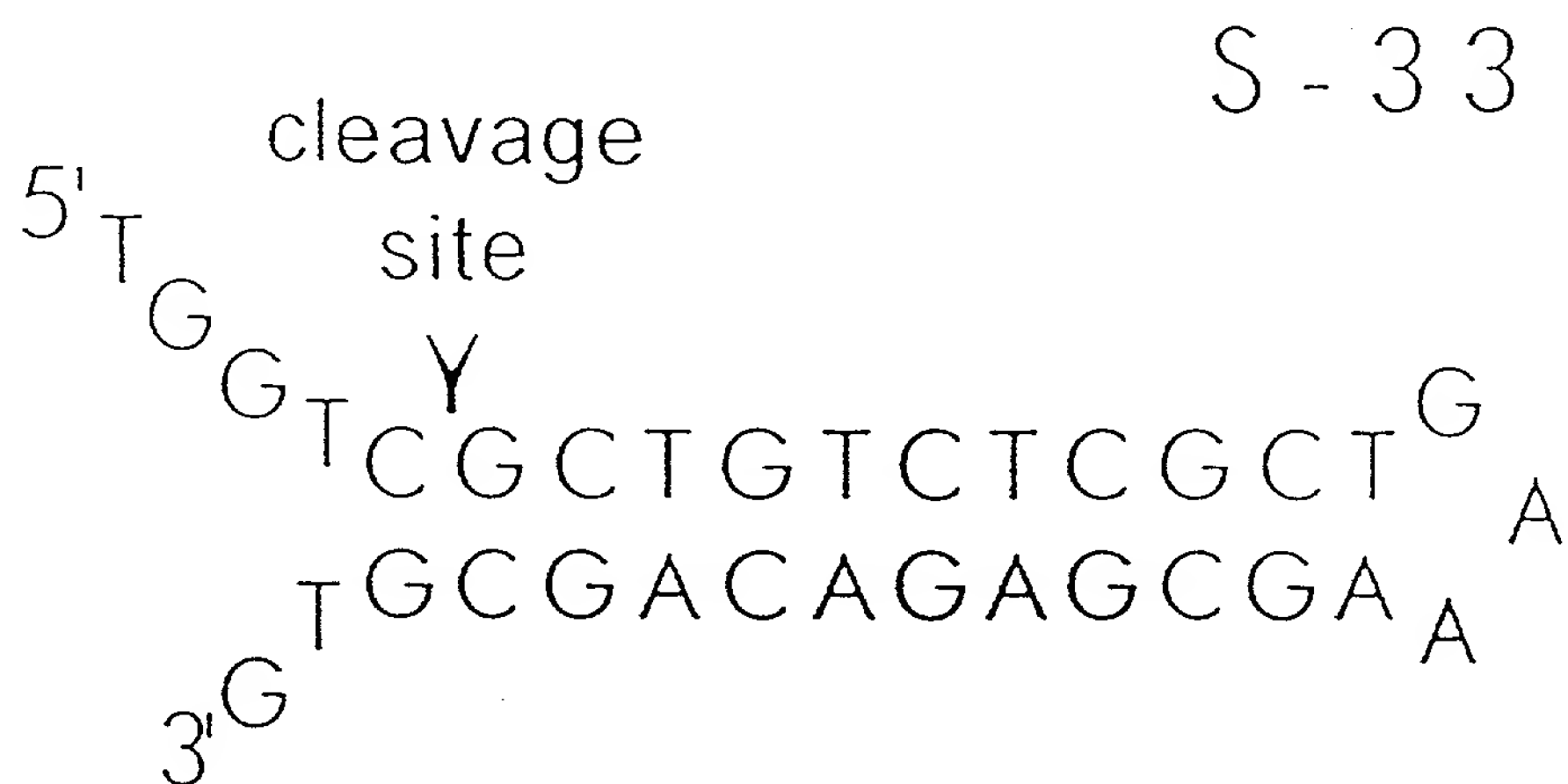
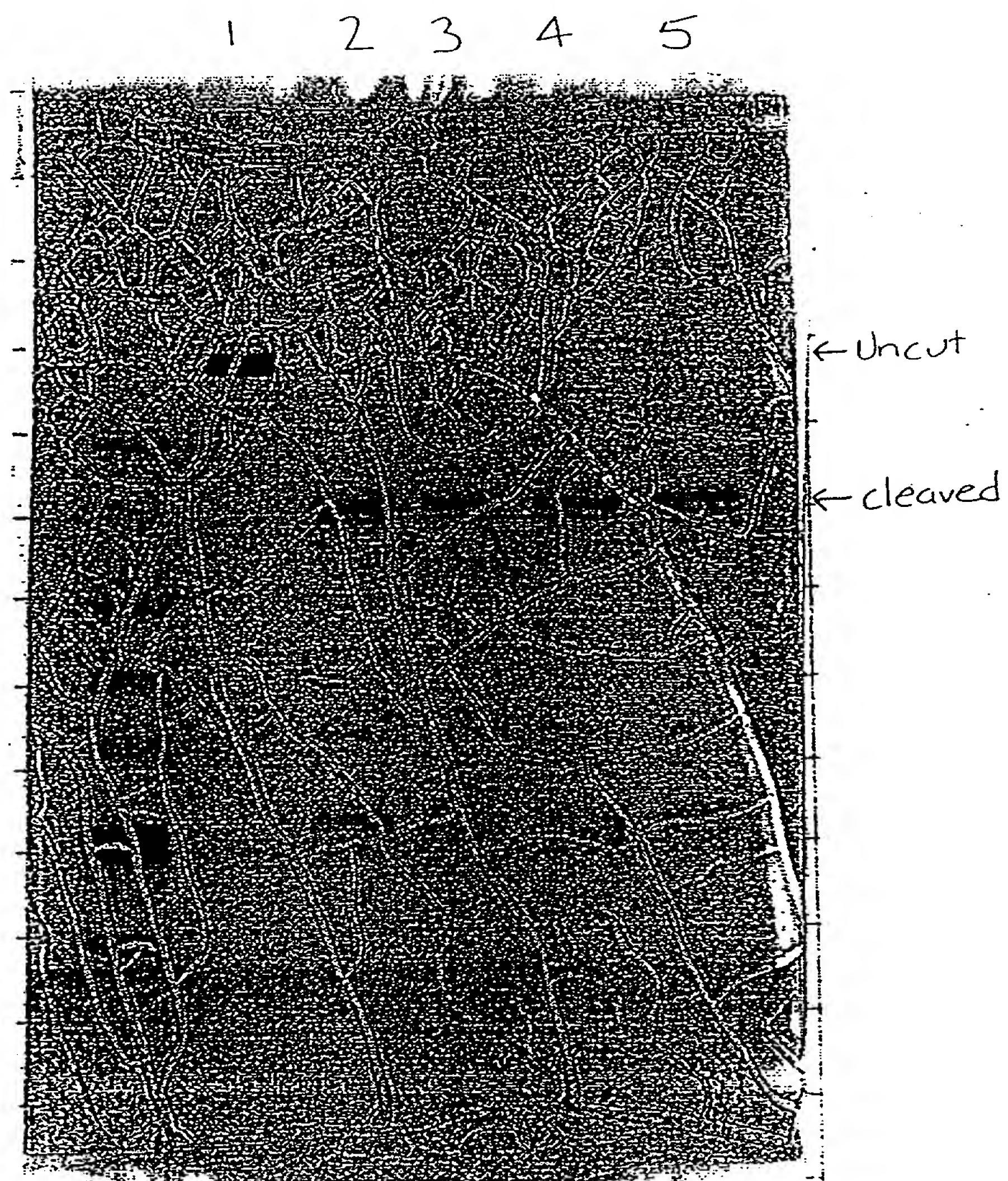
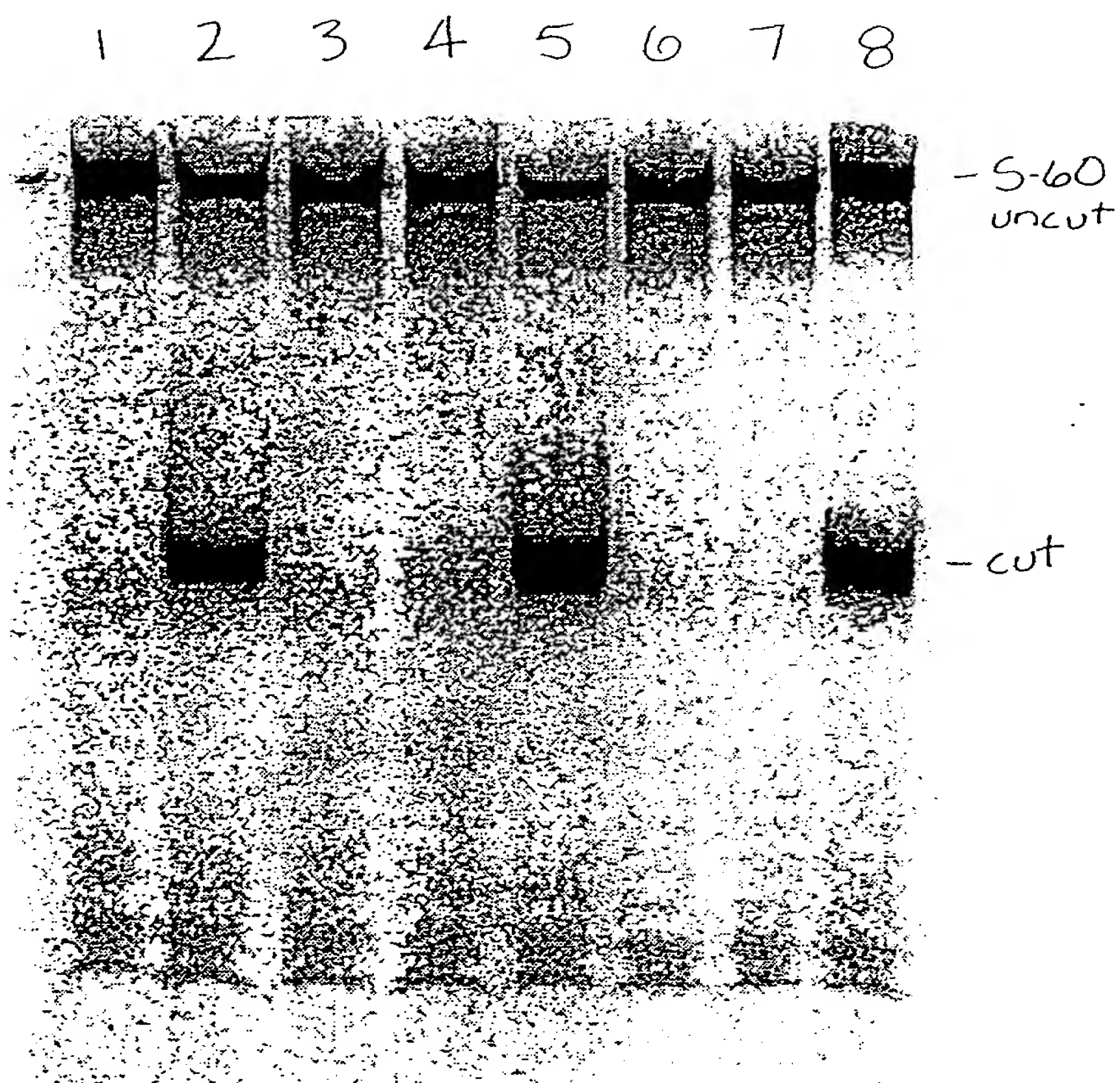


FIGURE 72



09664305 10000

FIGURE 73



09684309.100500

FIGURE 74

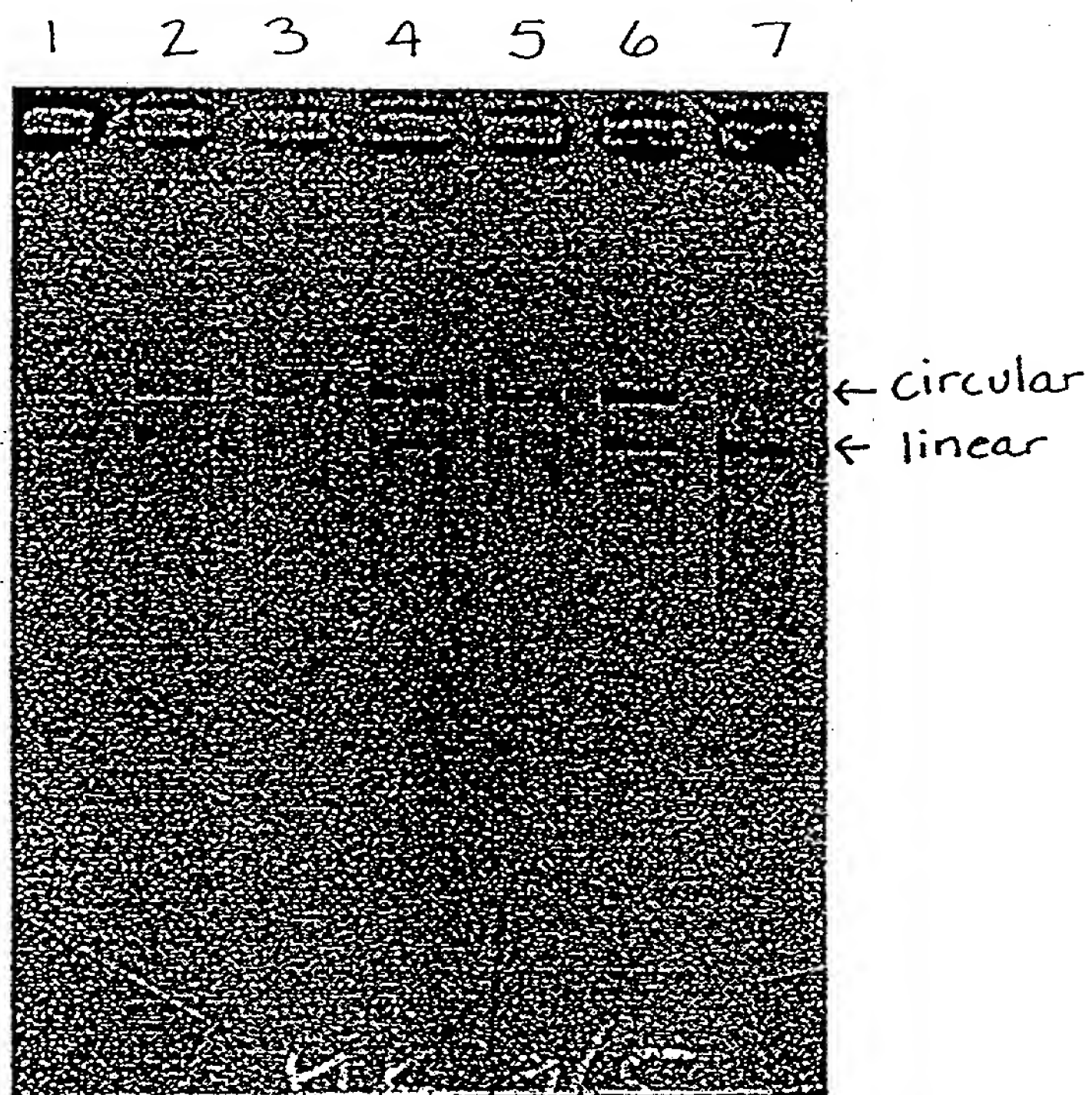
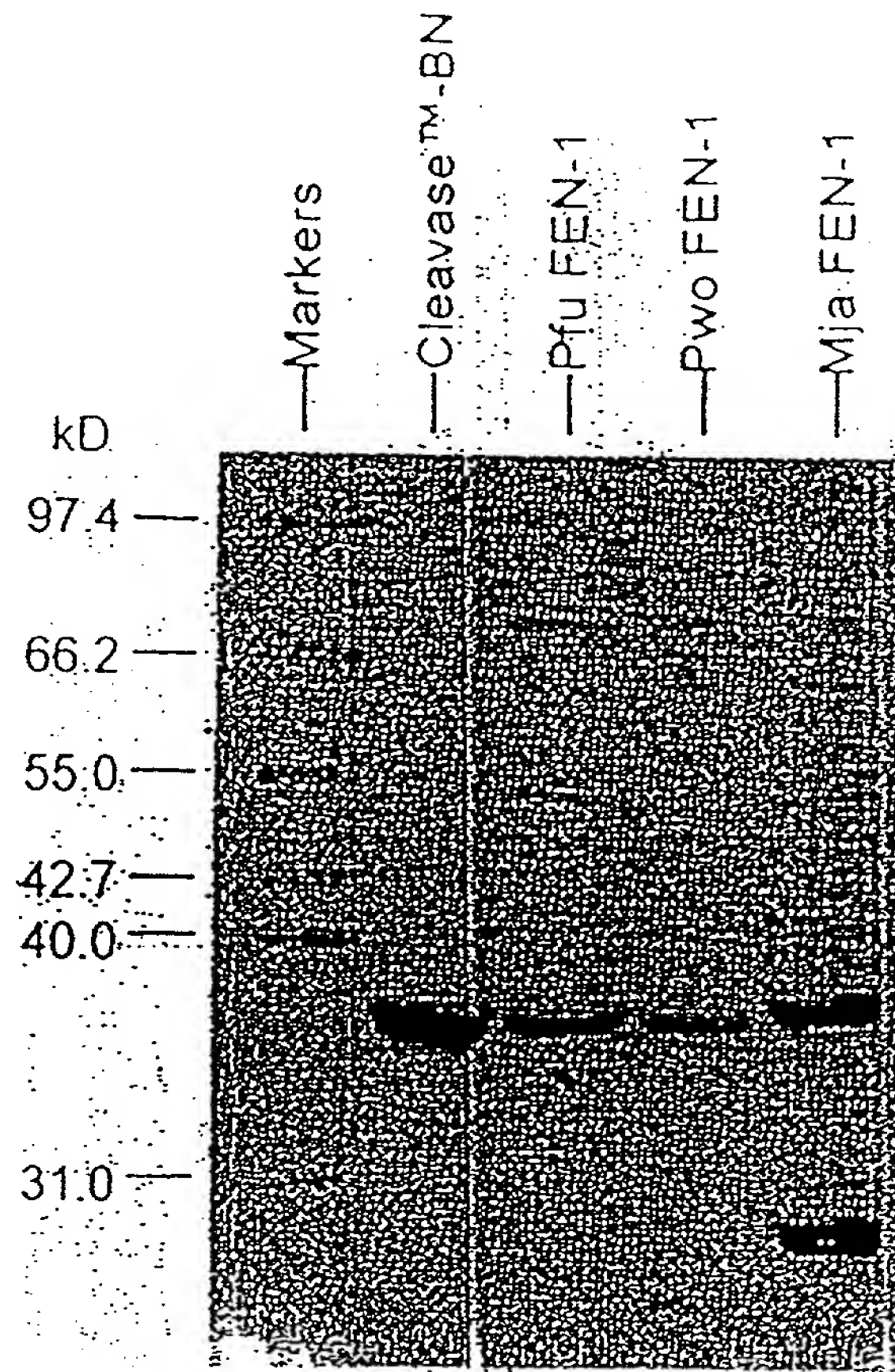
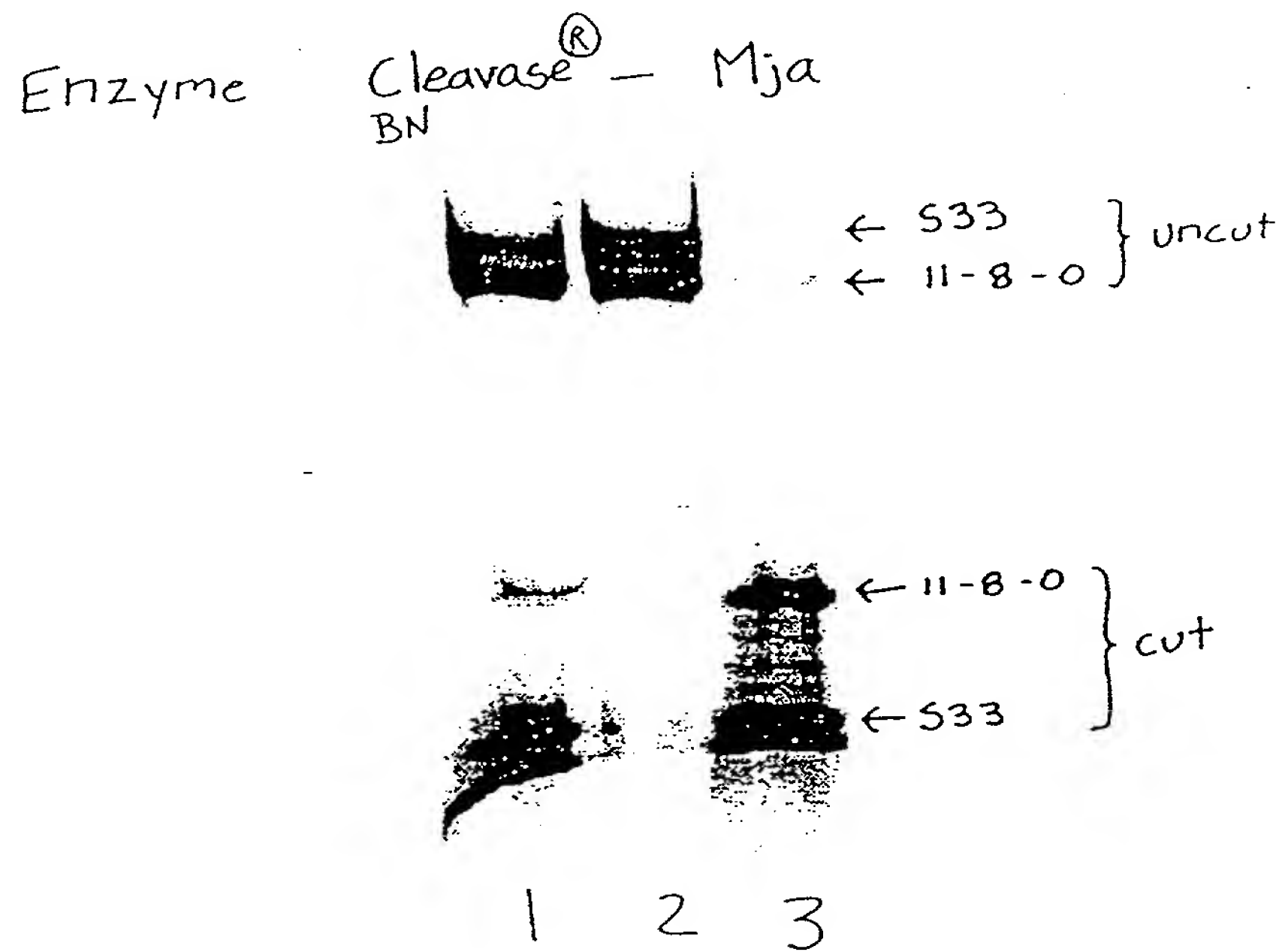


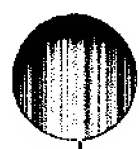
FIGURE 75



91/127

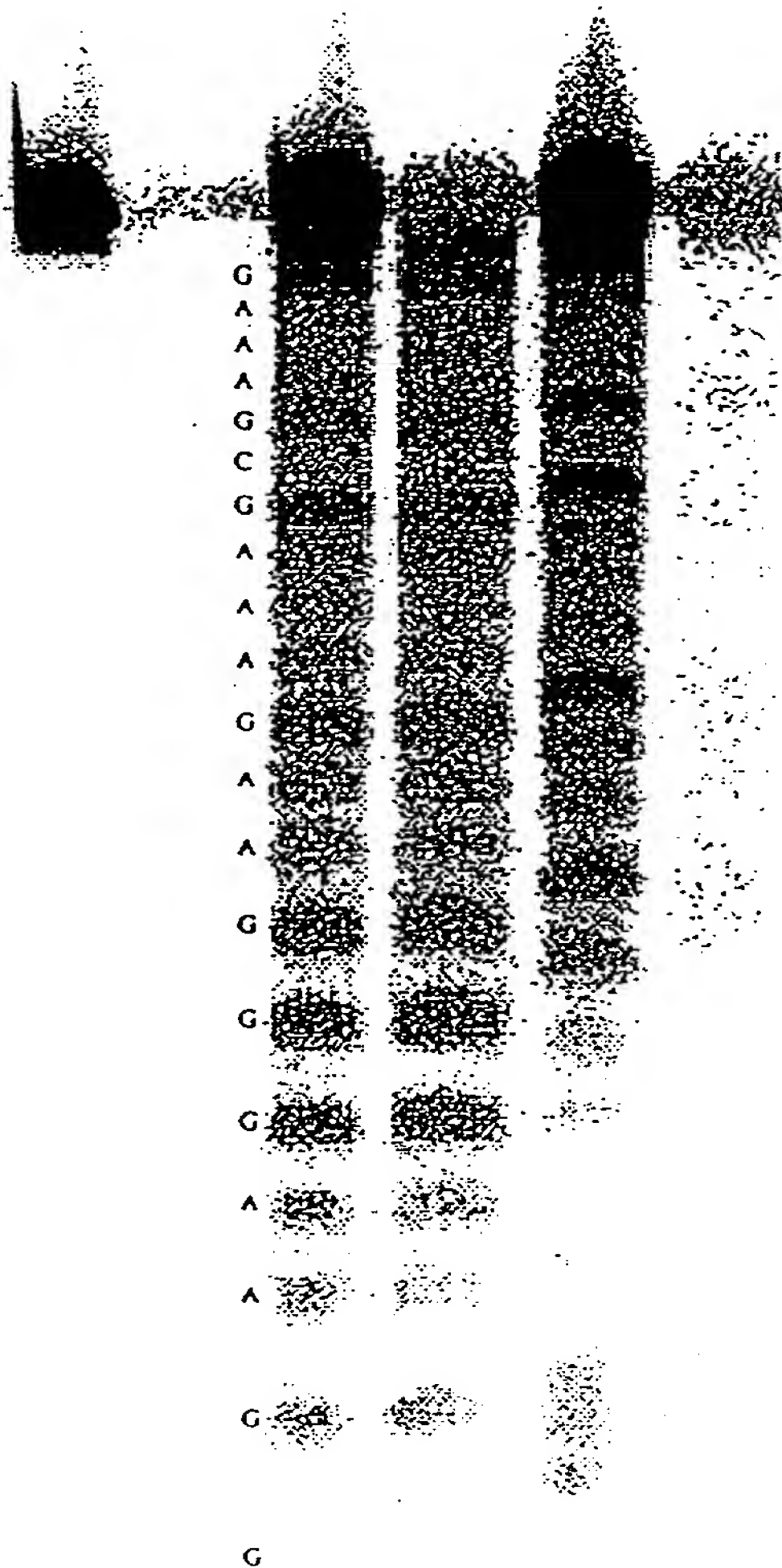
FIGURE 76





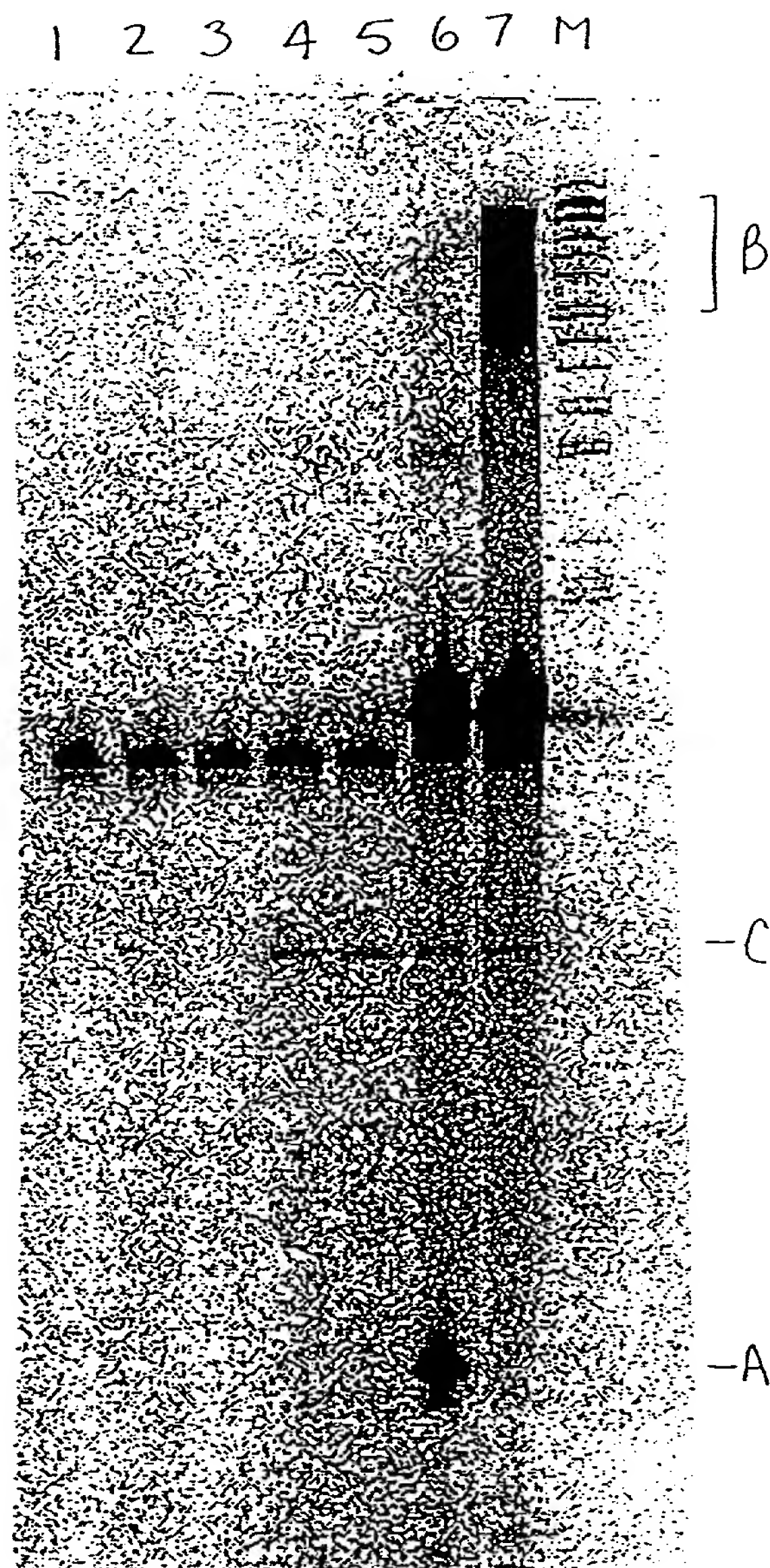
| | | | | | |
|---|---|---|---|---|---|
| - | + | - | + | - | + |
| - | - | - | - | + | + |
| - | - | + | + | + | + |

Terminal Transferase
Alkaline Phosphatase
Thermal Degradation



5'-nAGAAAggaaggga agaaagcgaaagG-3'

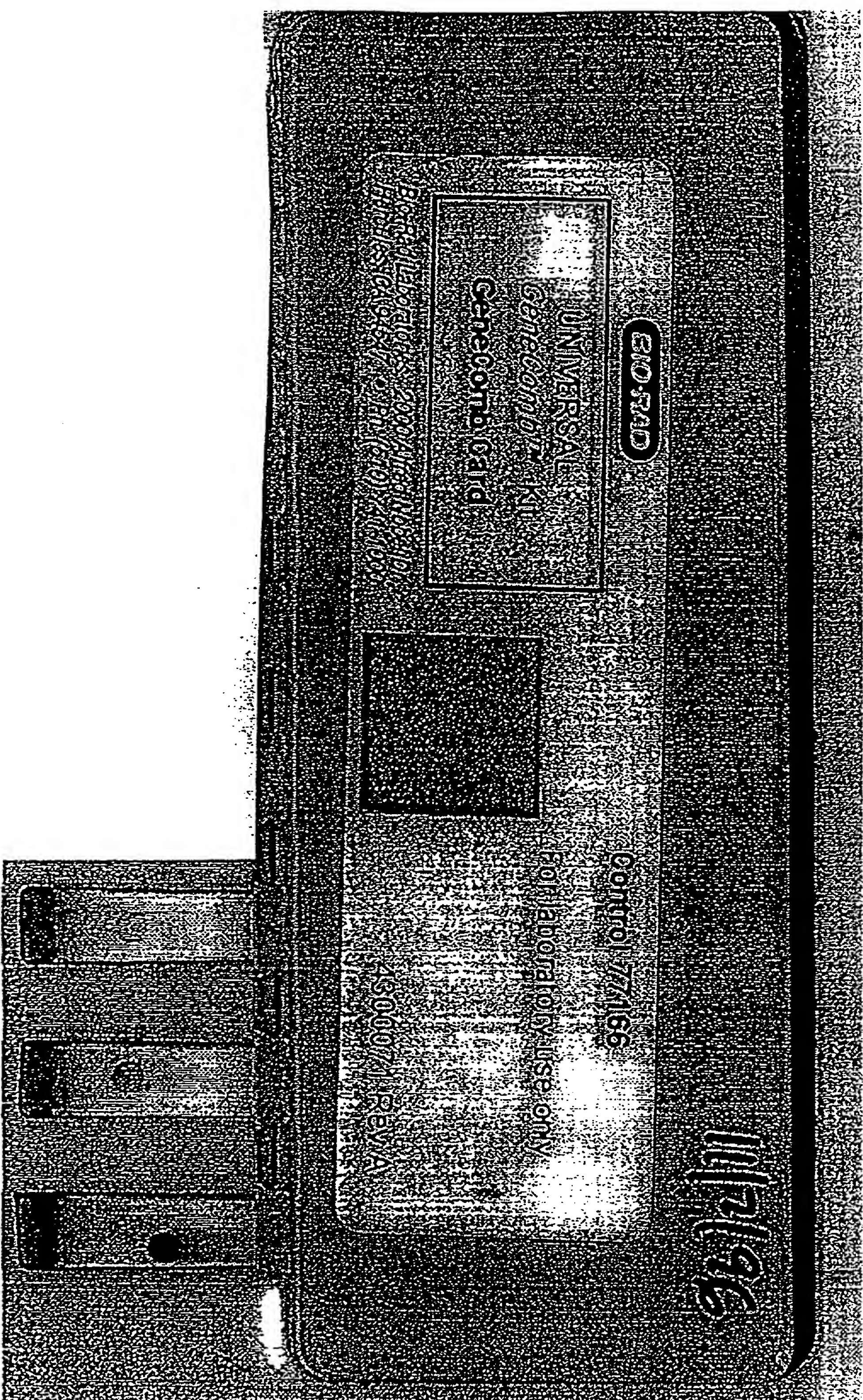
FIGURE 78



09684305 100600

94/127

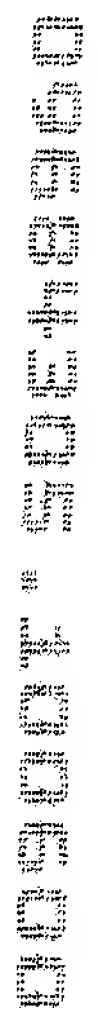
FIGURE 79



6 7 8

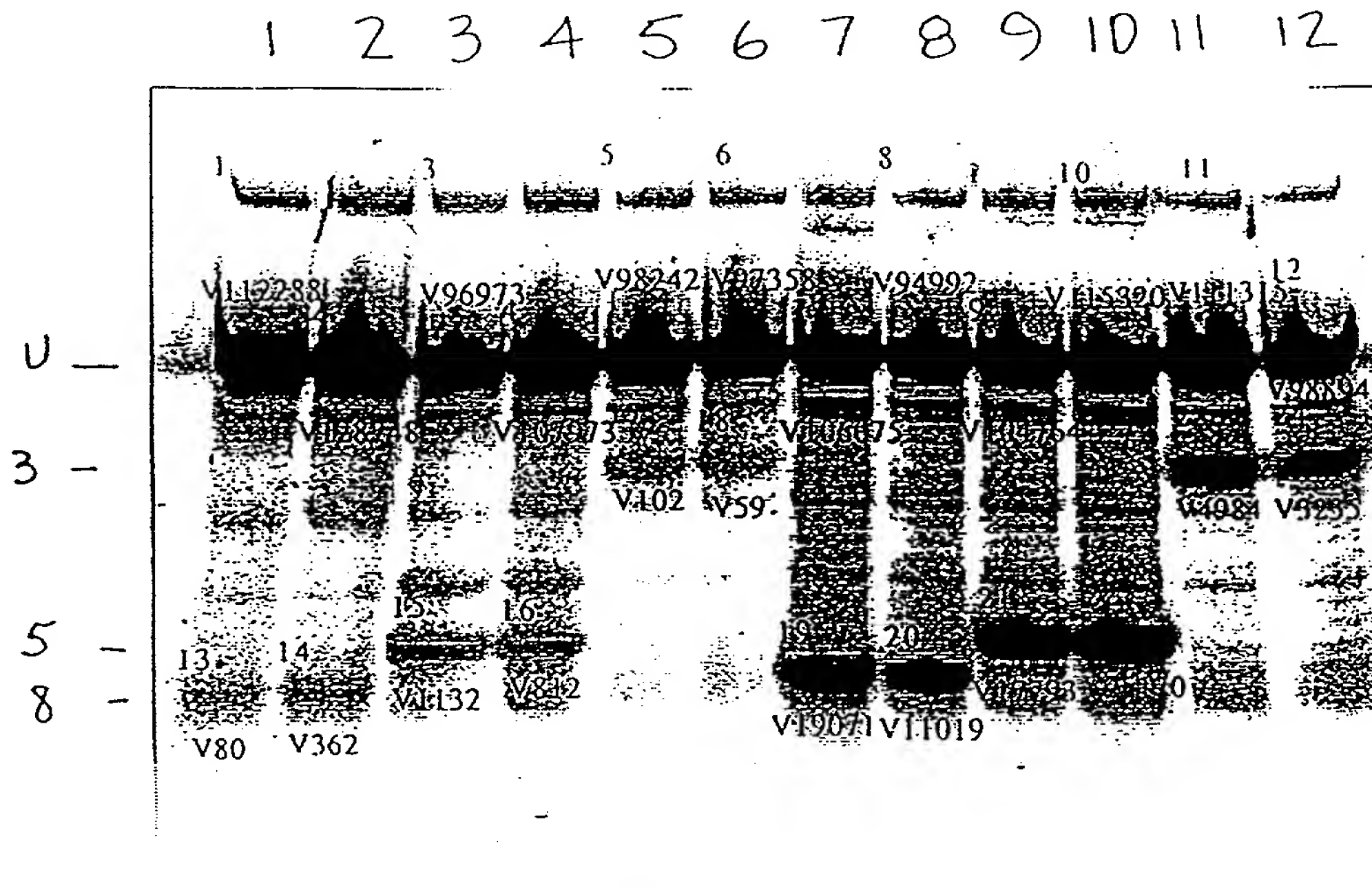
09684305 100600

AMERICAN SOCIETY OF MECHANICAL ENGINEERS
1120 K STREET, N.W., WASHINGTON, D.C. 20004
MEMBER SERVICE DEPARTMENT
TELEPHONE (202) 295-6241
FAX (202) 295-6242
E-MAIL: ASME@ASME.ORG
WWW.ASME.ORG



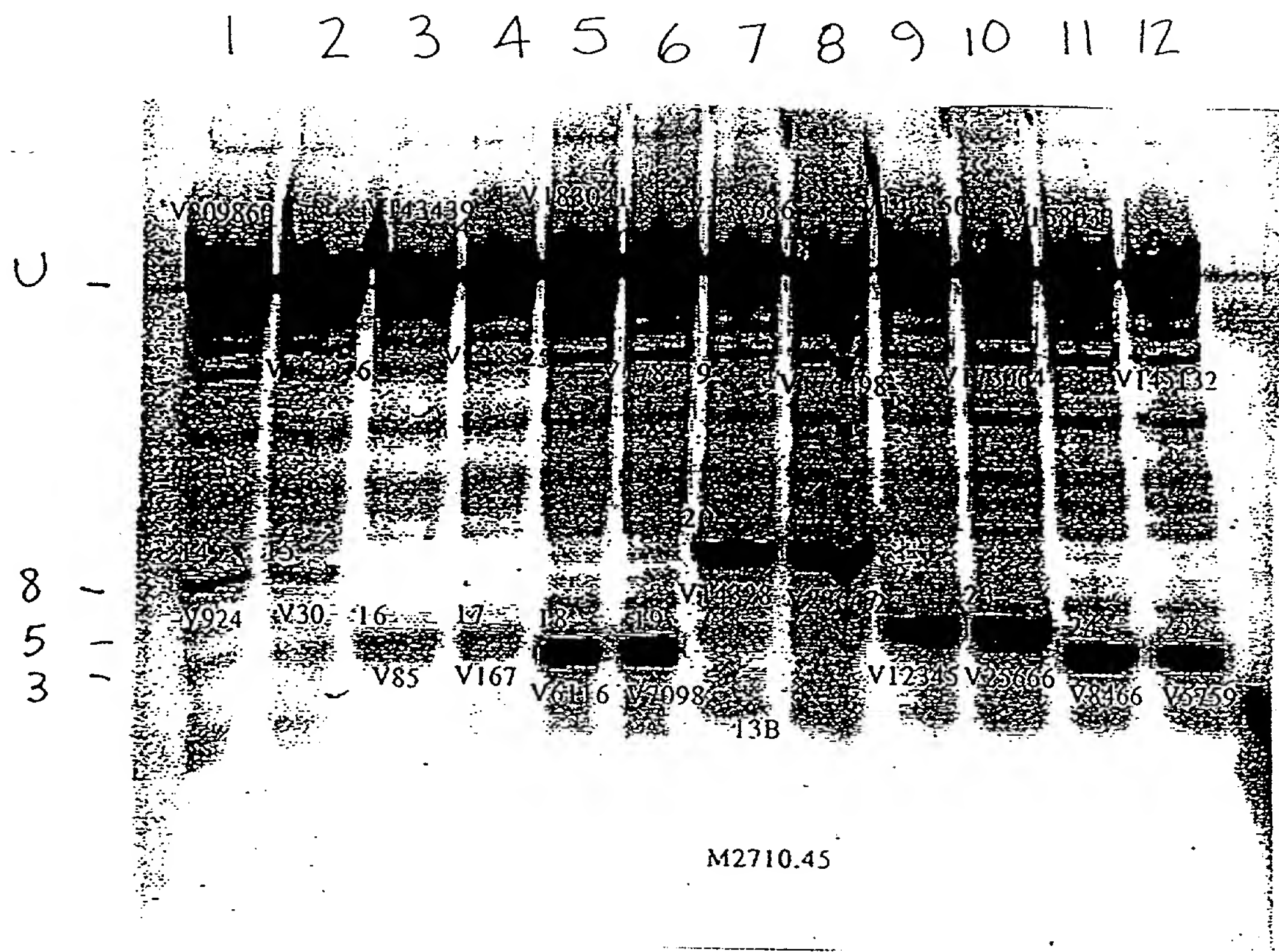
96/127

FIGURE 81



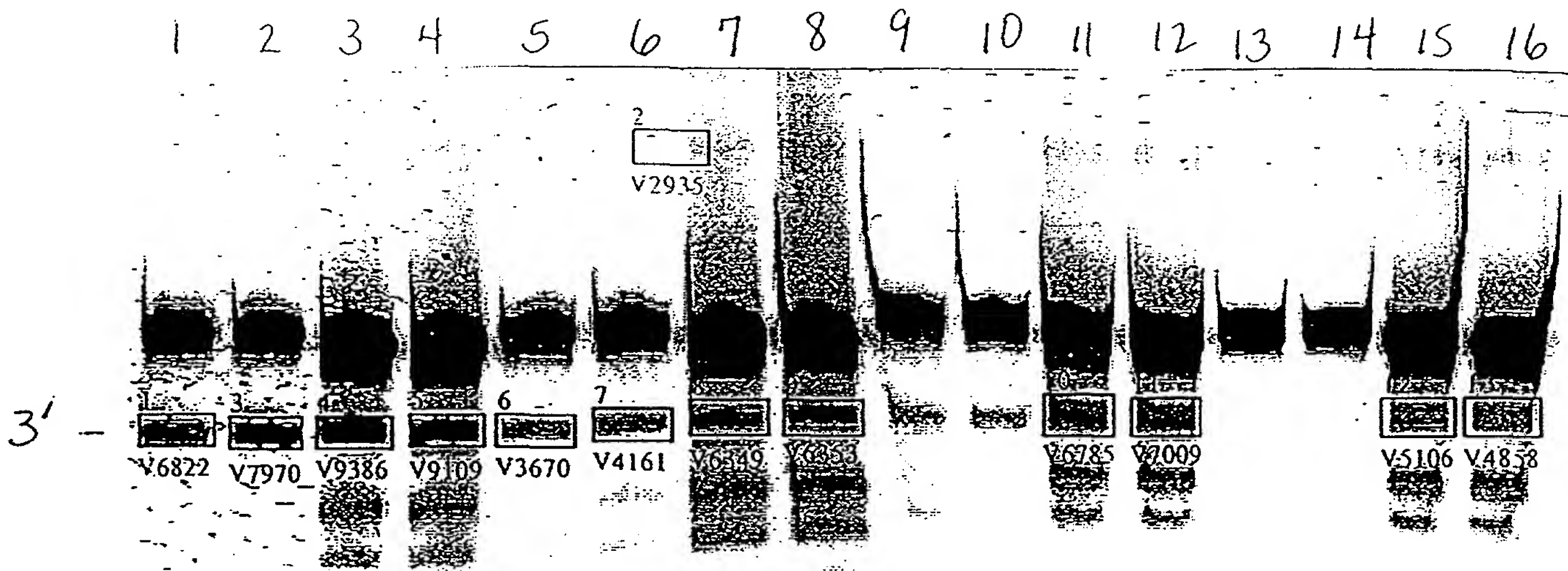
97/127

FIGURE 82

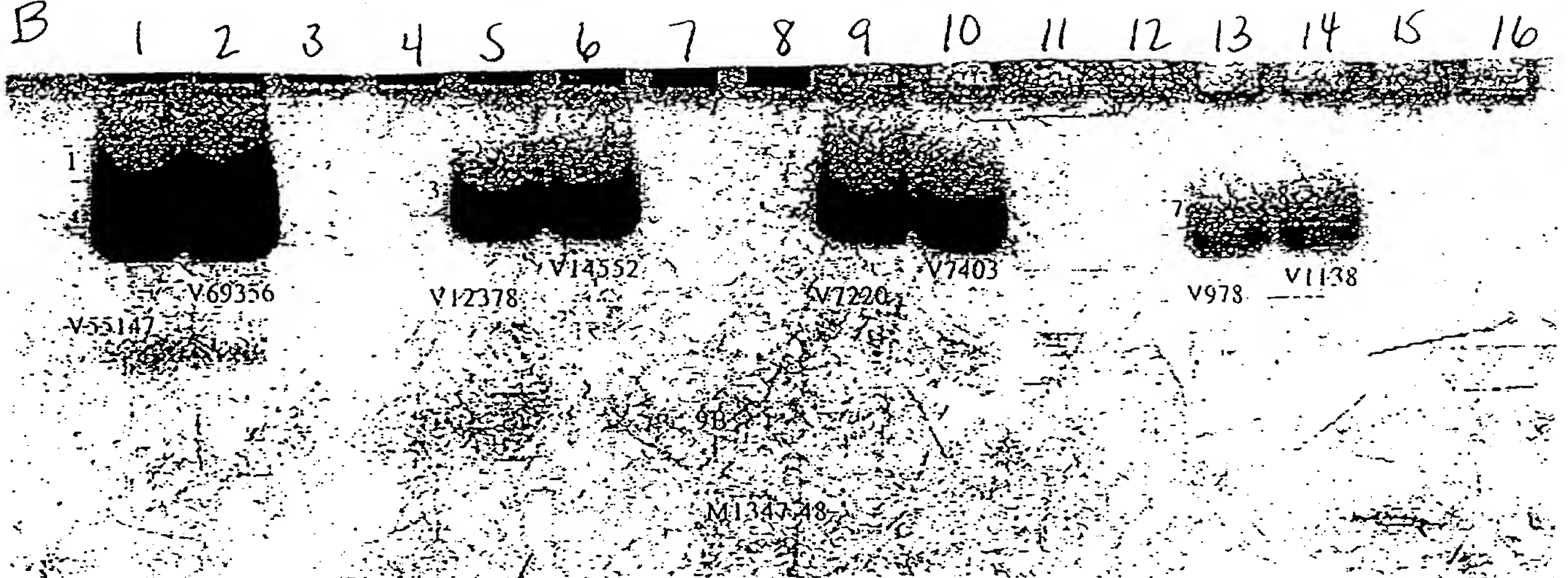


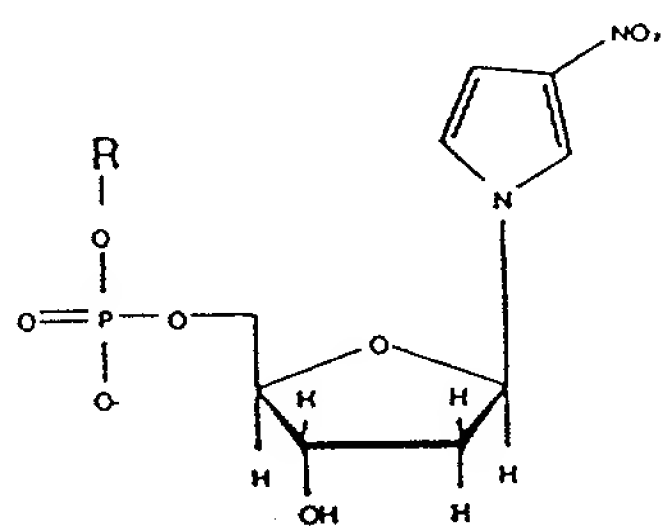
98/127

A

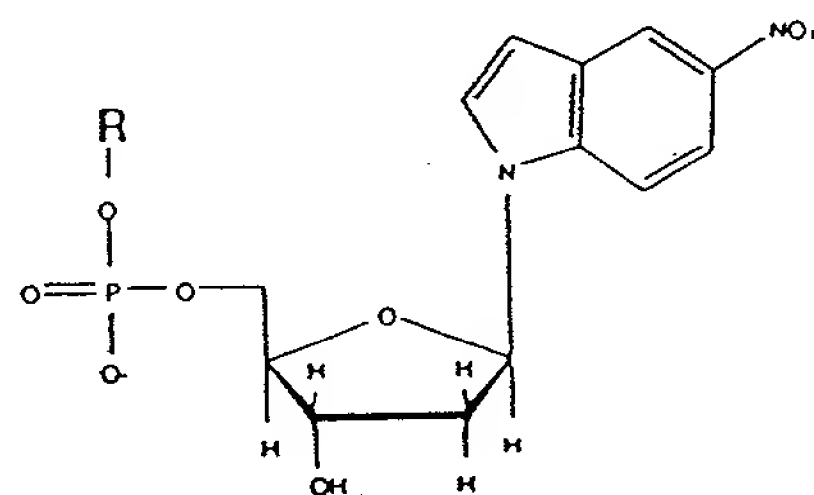


B



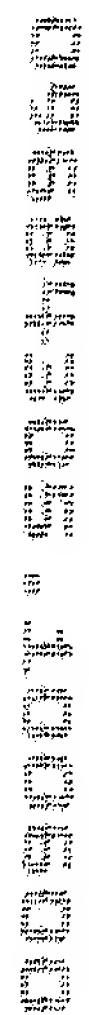


3-nitropyrrole



5-nitroindole

The logo is a circular seal for the American Society of Mechanical Engineers (ASME). It features a central shield with a gear and a hammer, surrounded by the text "AMERICAN SOCIETY OF MECHANICAL ENGINEERS" and "FOUNDED 1880".





1 Base
Mismatch

Allcomp
2 NI

1 Base
Mismatch
2 NI

Allcomp
1 NP

1 Base
Mismatch
1 NP

Inval
#

67

114

115

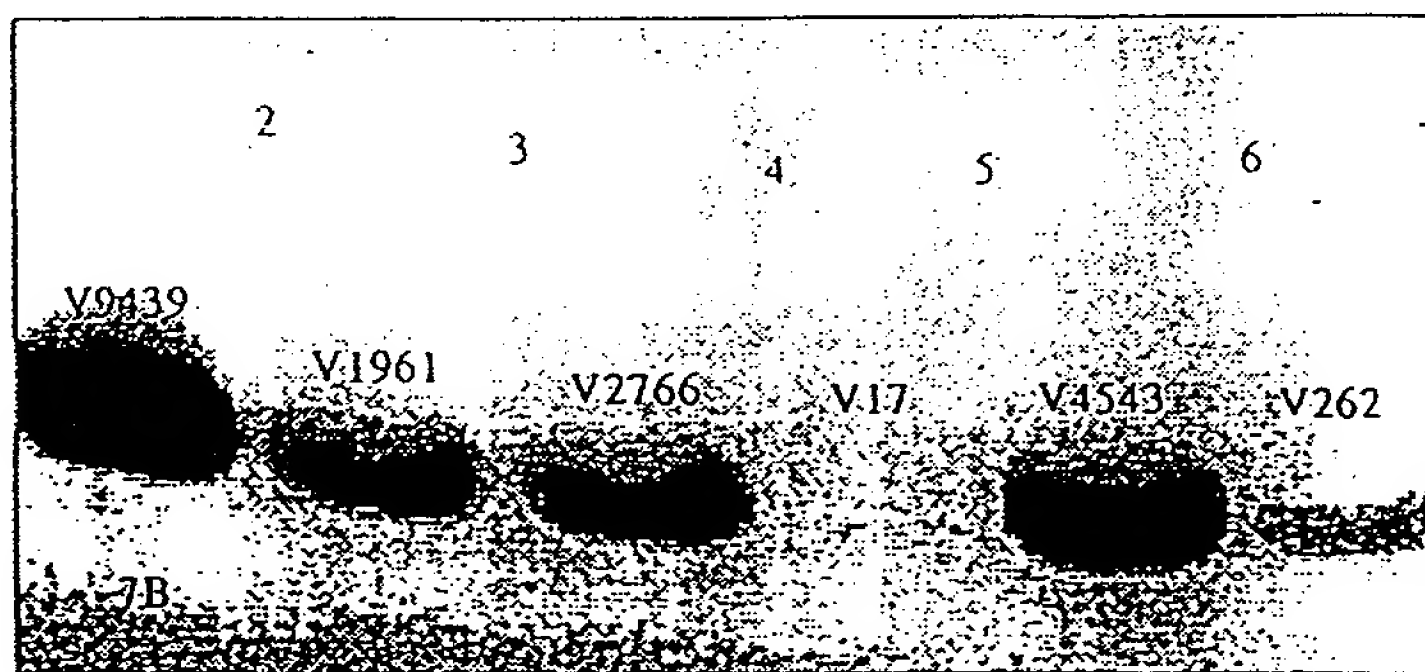
116

112

113

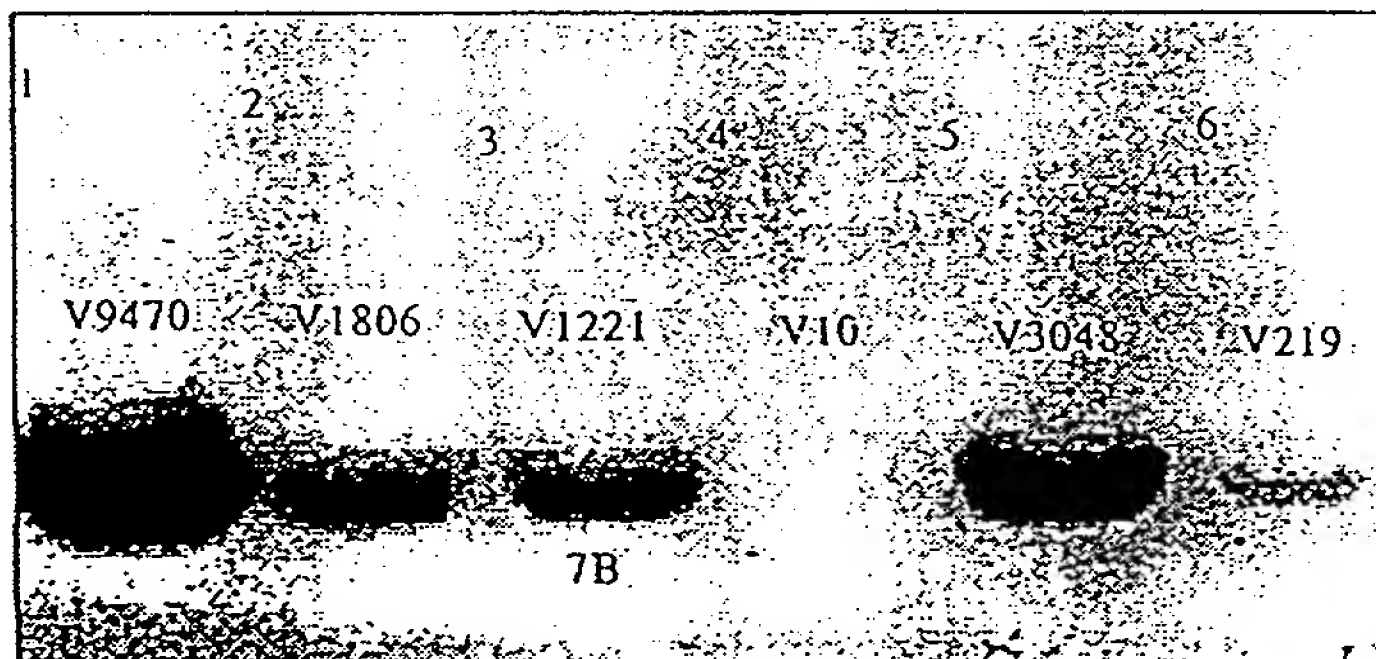
A

52°C



B

55°C



C

58°C

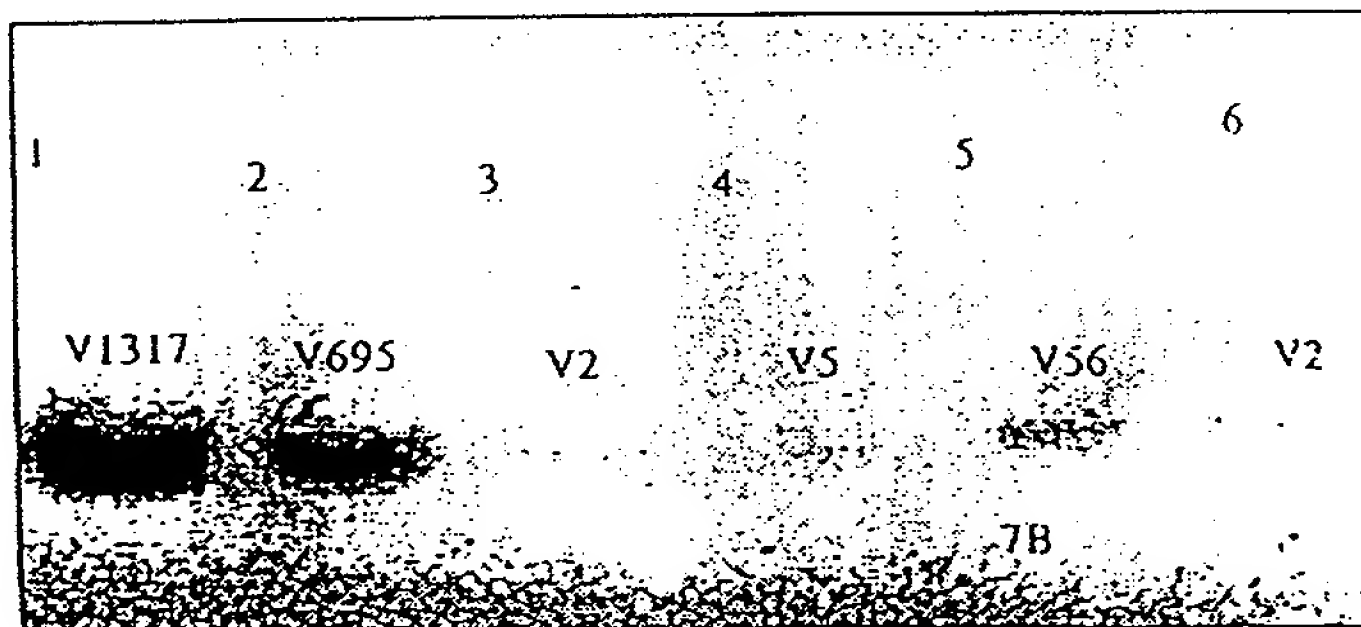


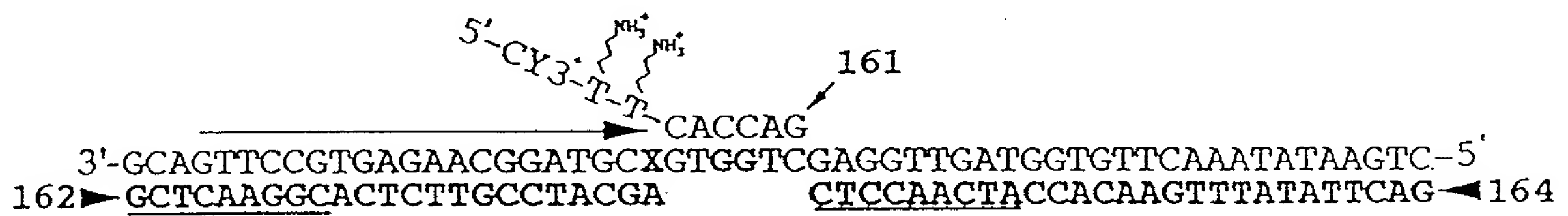


FIGURE 87

Codon 13
Point Mutation

166 (wt)
3'-CAGTTCCGTGAGAACGGATGCGGTGGTCGAGGTTGATGGTGTTCAAATATAAGTC-5'

165 (mutant)
3'-CAGTTCCGTGAGAACGGATGCAGTGGTCGAGGTTGATGGTGTTCAAATATAAGTC-5'



The logo of the National Association of Broadcasters (NAB) is a circular emblem. It features a central shield with a stylized 'N' and 'B' inside. The shield is flanked by two columns of text. The top of the shield is arched and contains the words 'NATIONAL ASSOCIATION OF BROADCASTERS'. The bottom of the shield is also arched and contains the words 'ESTABLISHED 1922'. The entire emblem is enclosed within a circular border.

[illegible]

104/127

A

B

C

1 2 3 4 5 6

105/127

Invader 3'-end Substituents

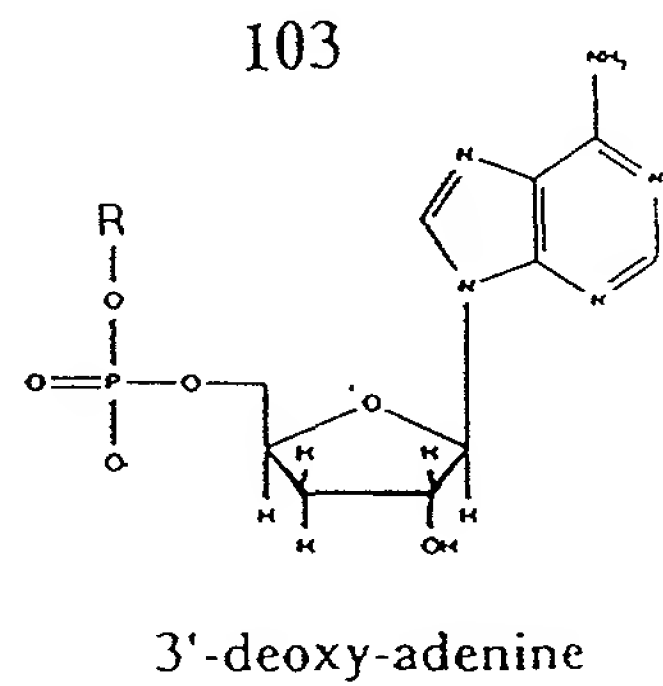
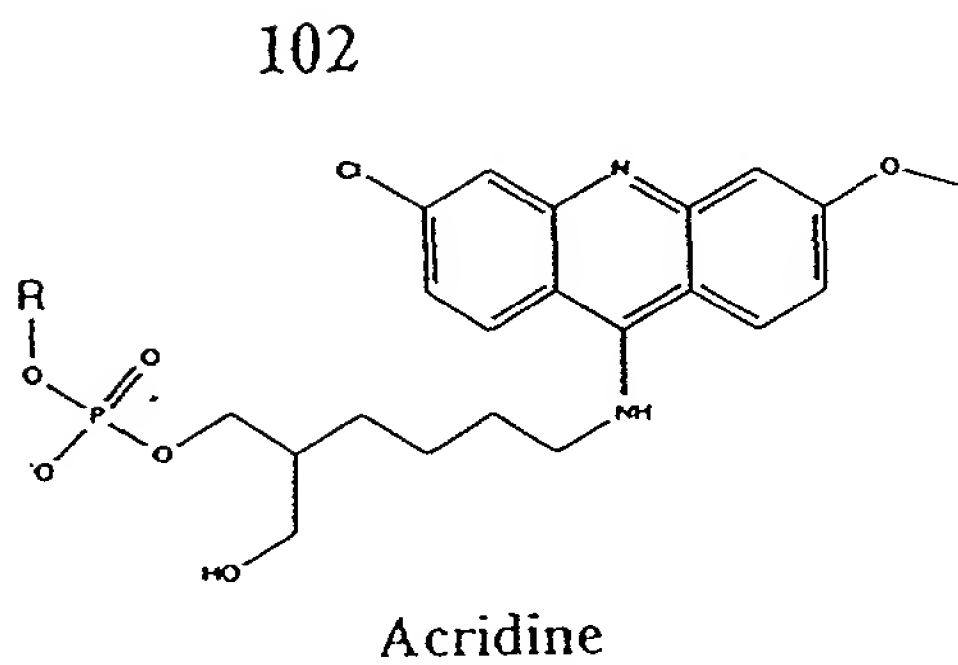
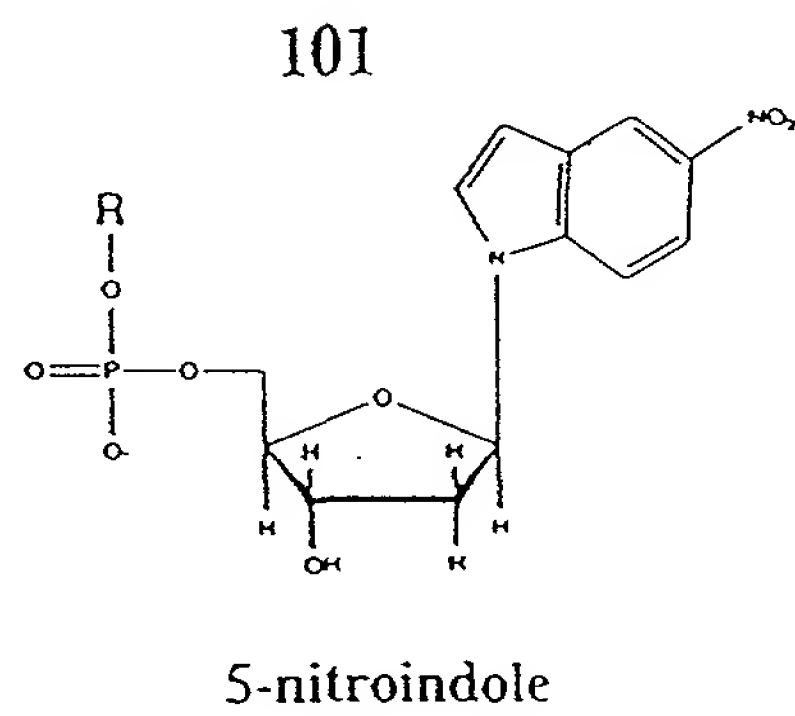
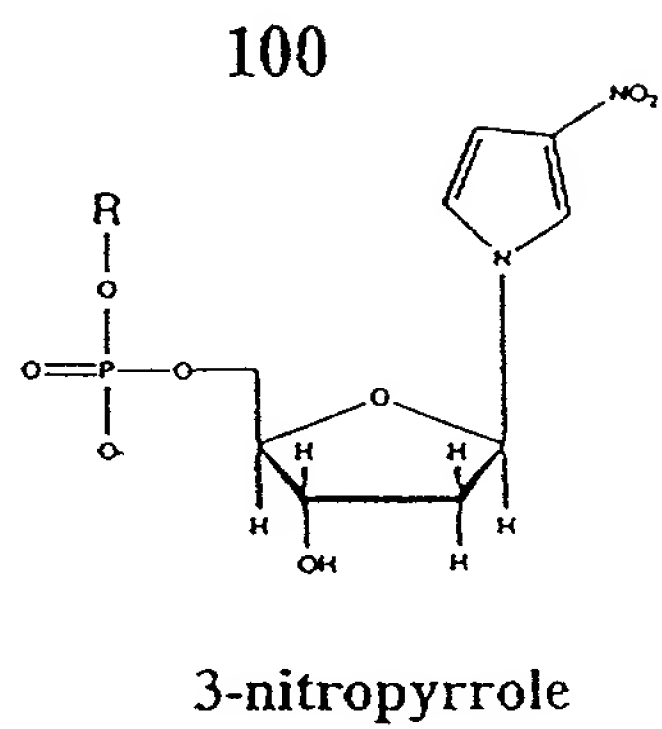
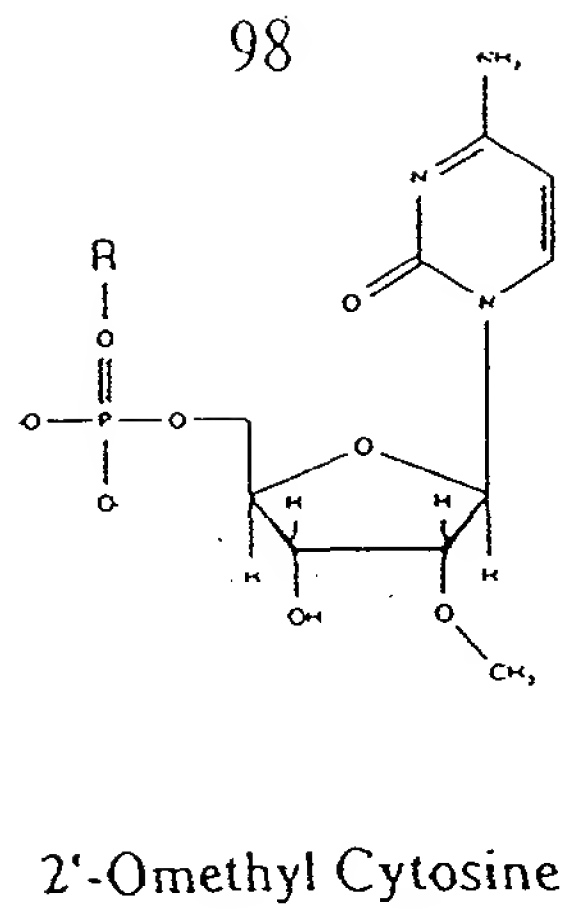
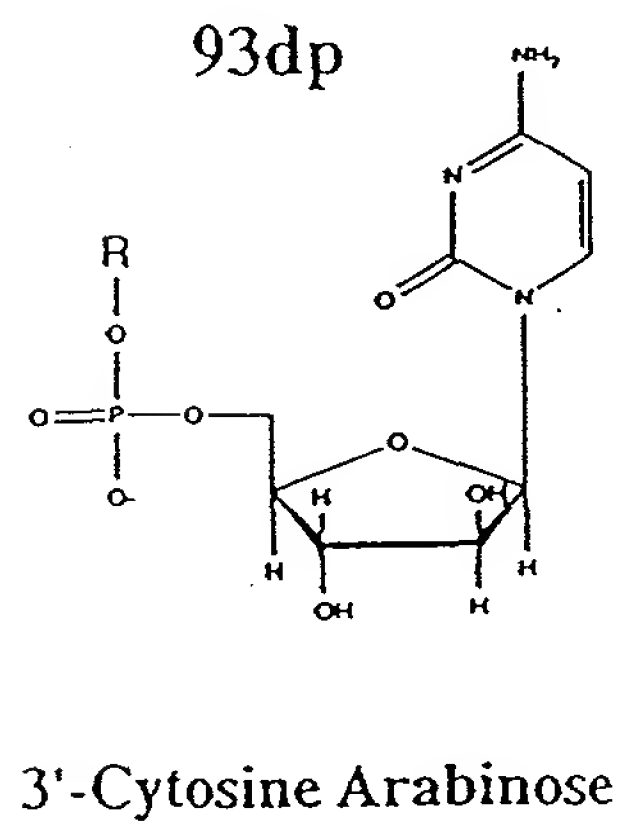
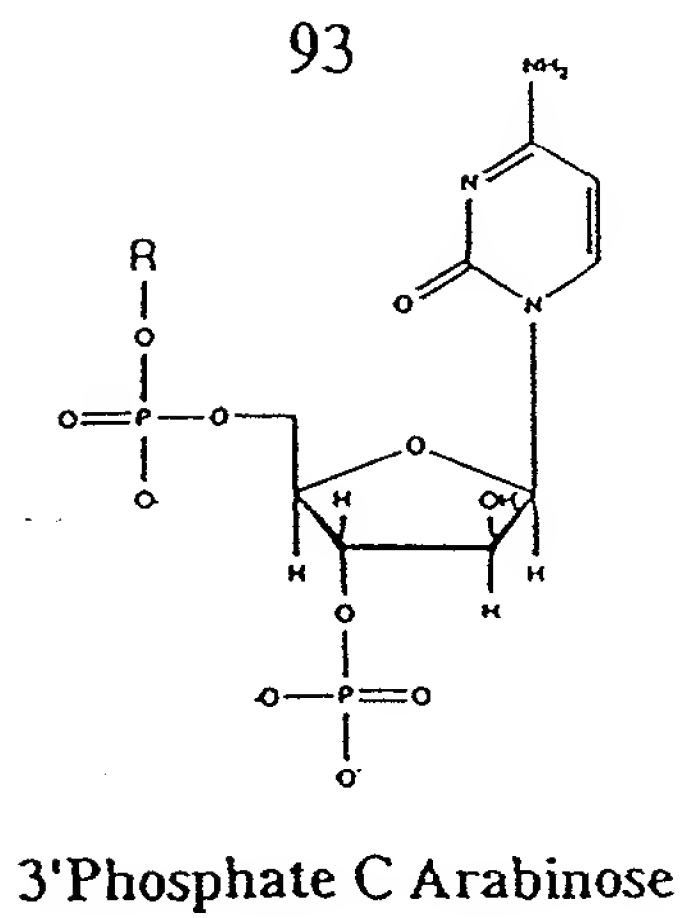
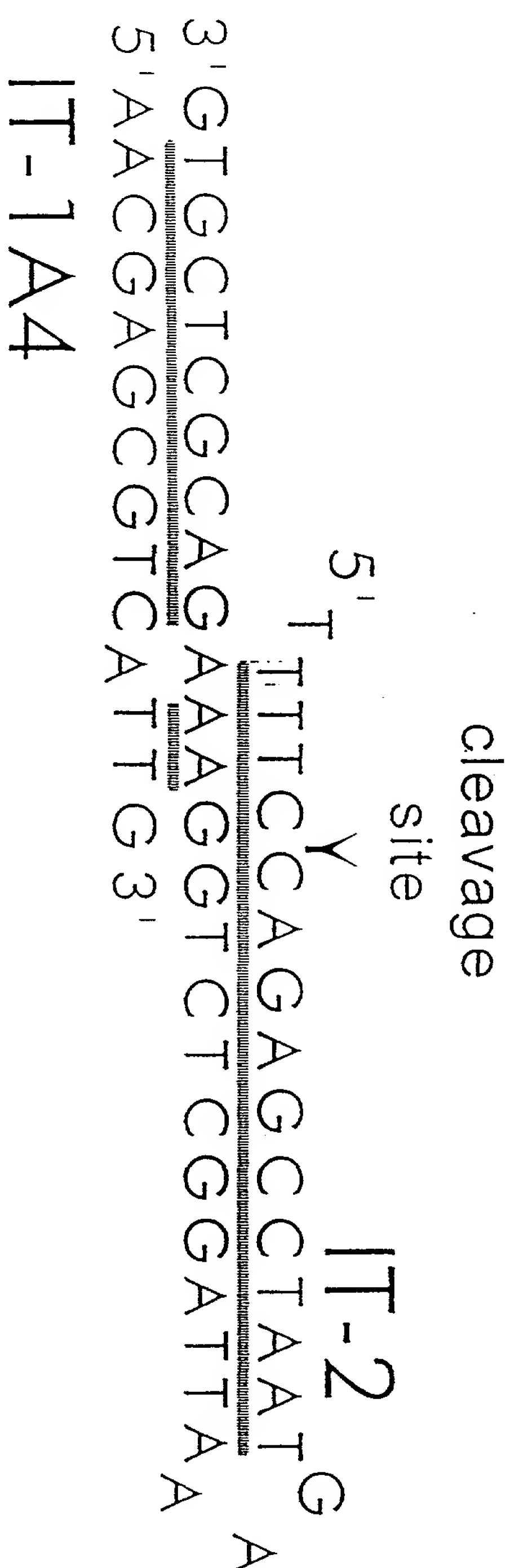
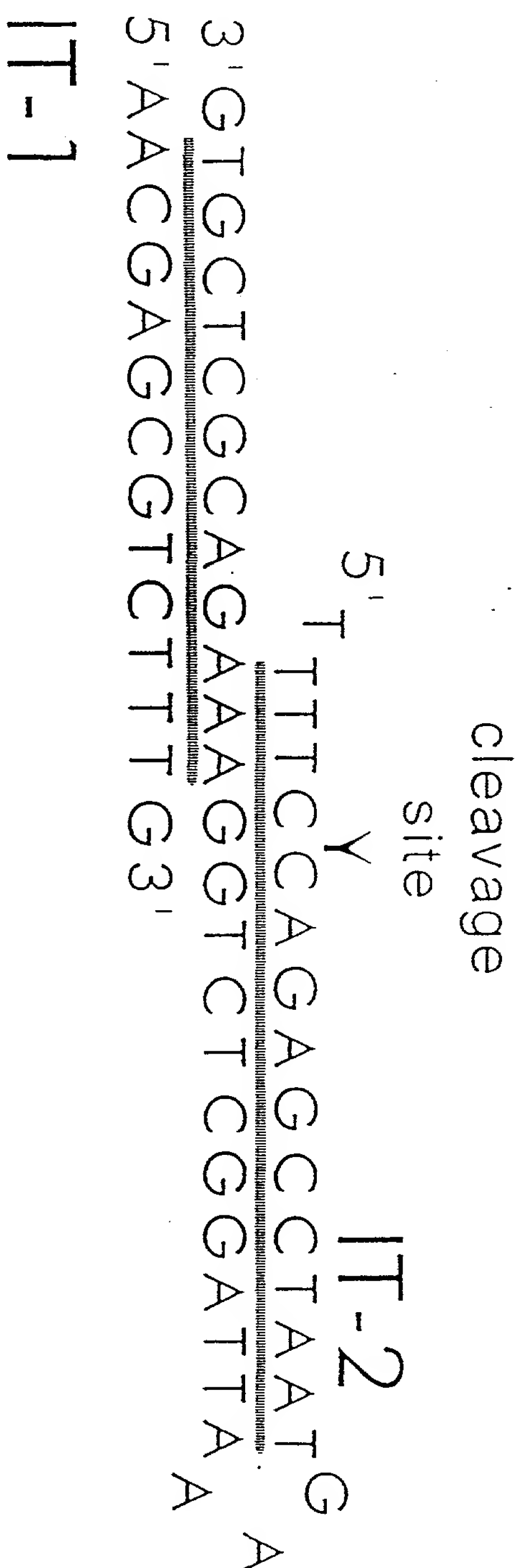


FIGURE 92



721/801



- Uncut

[illegible]

109/127

FIGURE 94

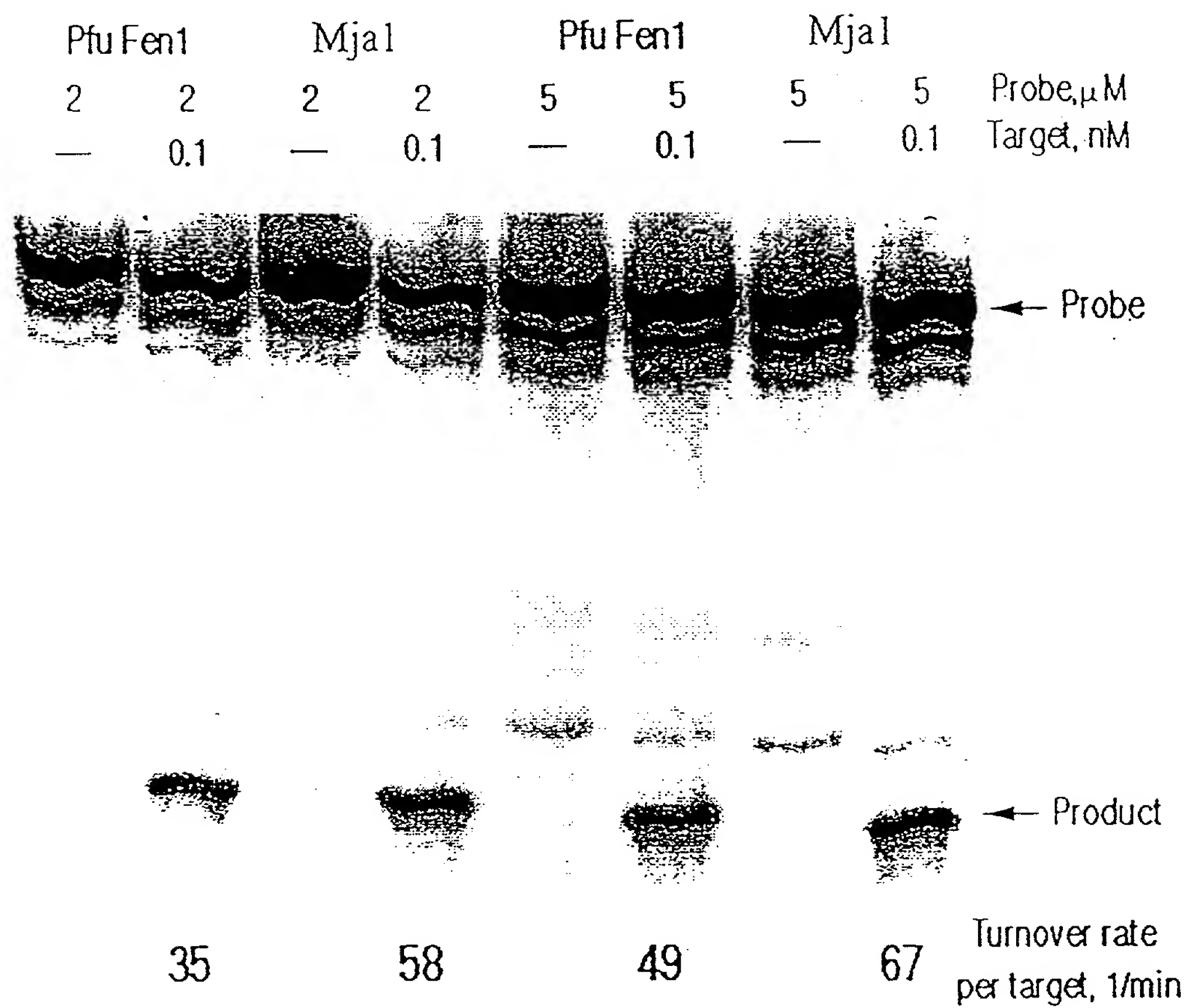
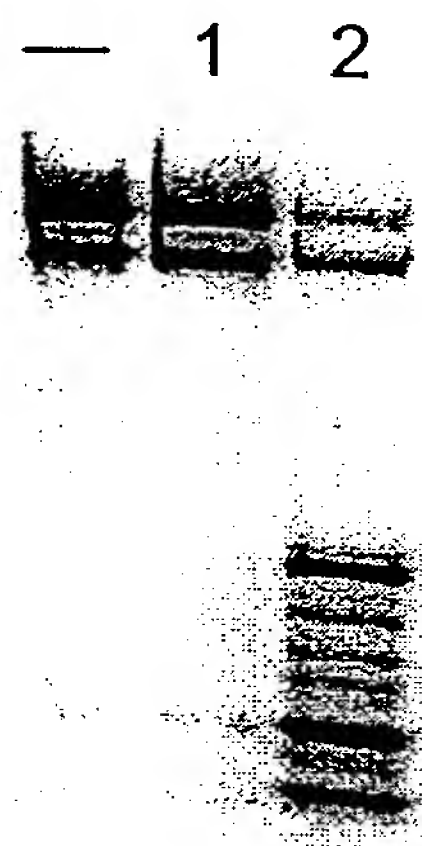


FIGURE 96

A



B

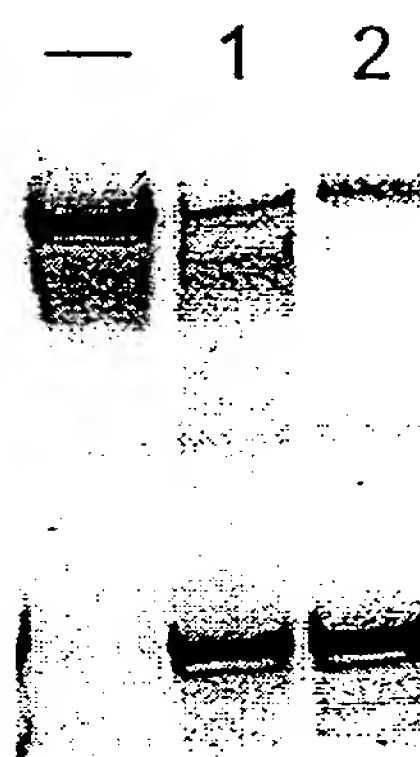


FIGURE 97

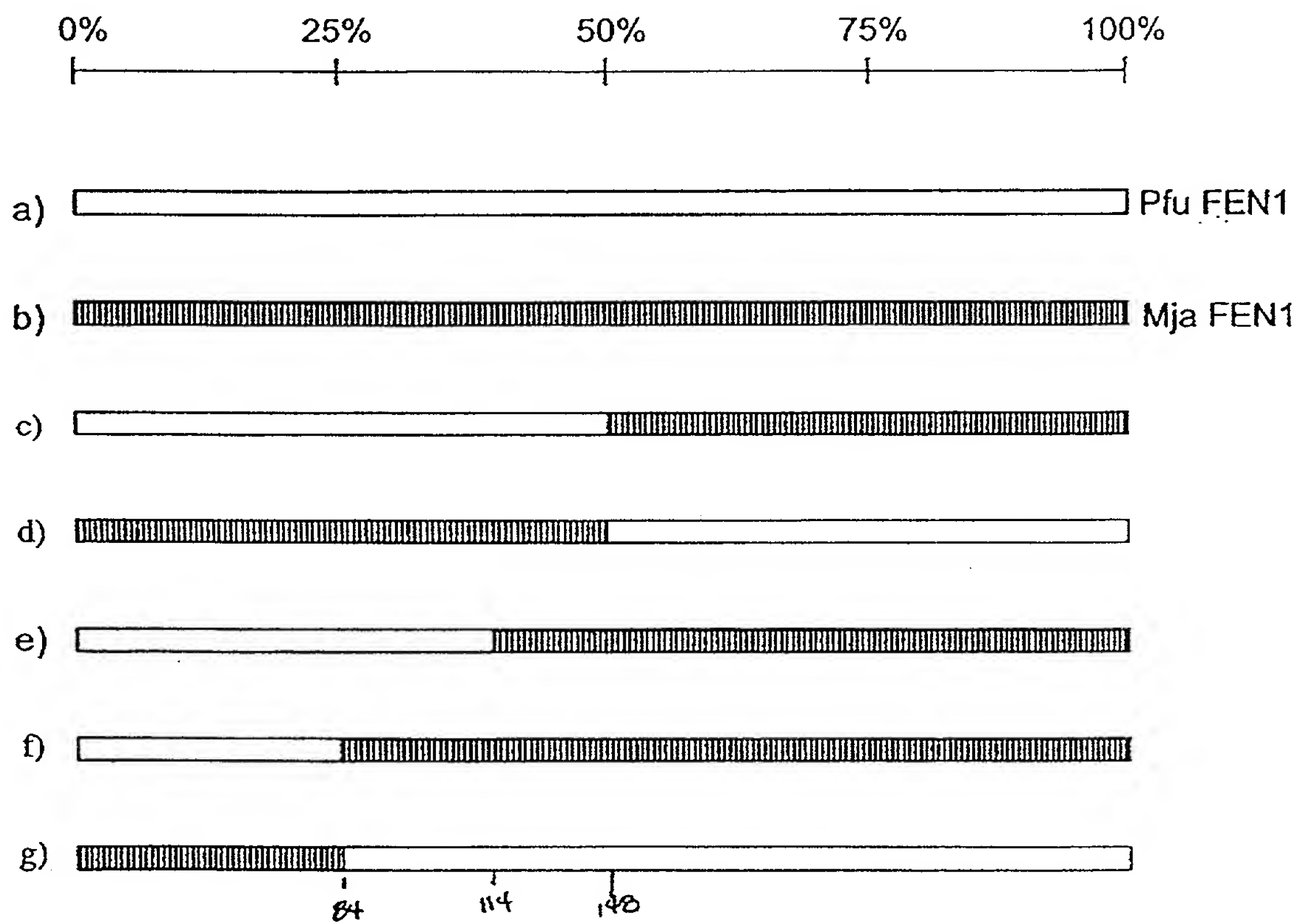
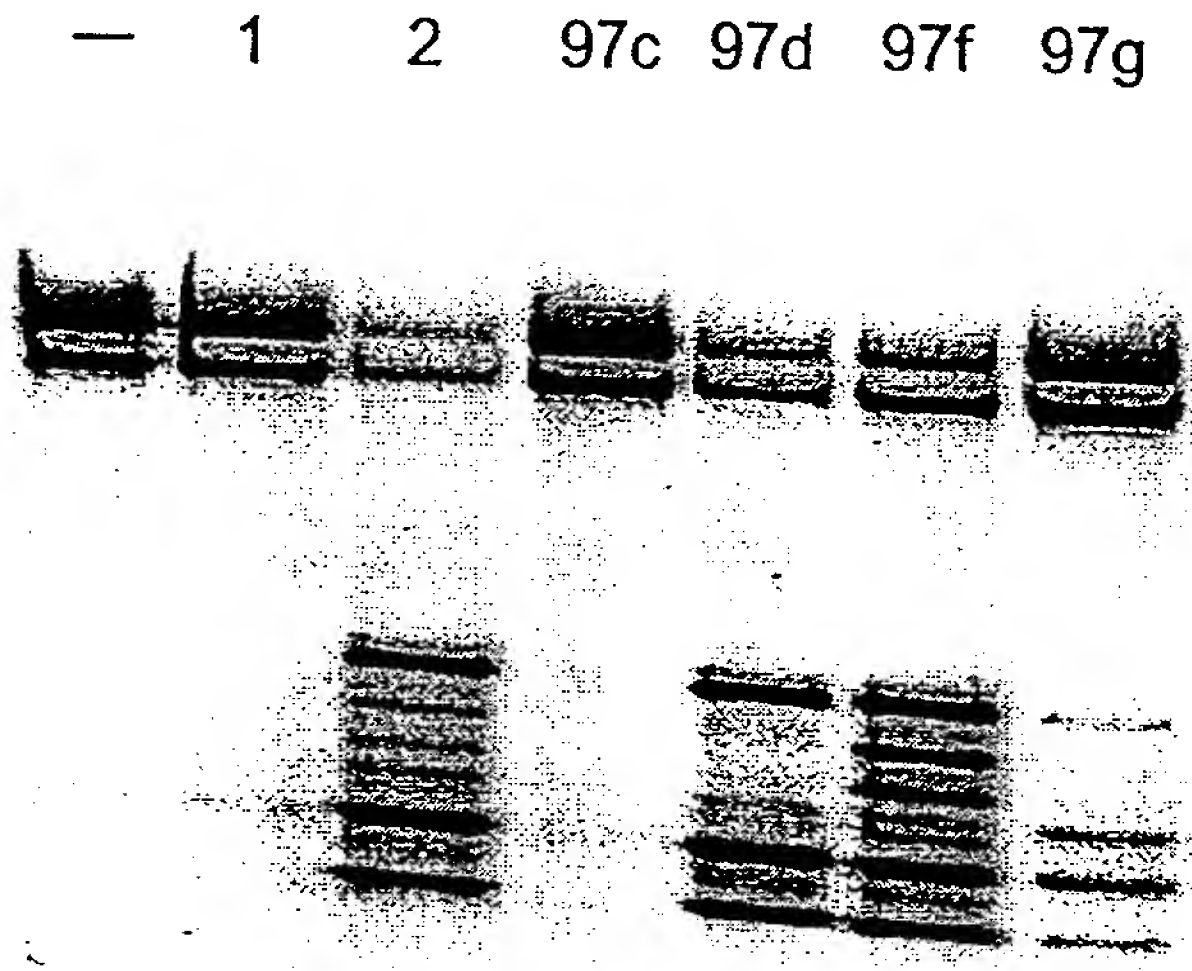


FIGURE 98A



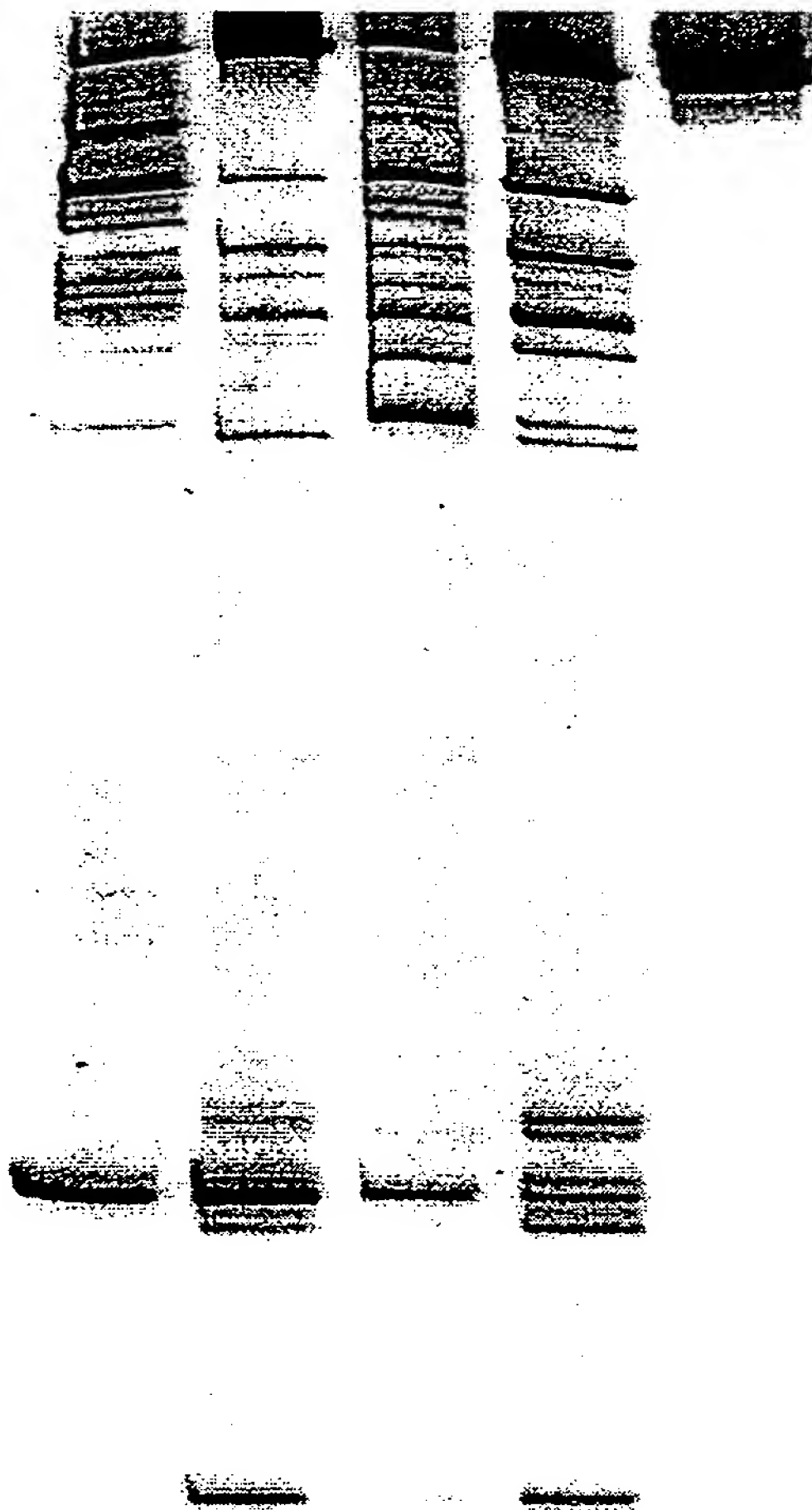
09634306-100600

[illegible]

FIGURE 99

Cleavase[®] BN

2 97d 97f —



09664303-100600

FIGURE 100

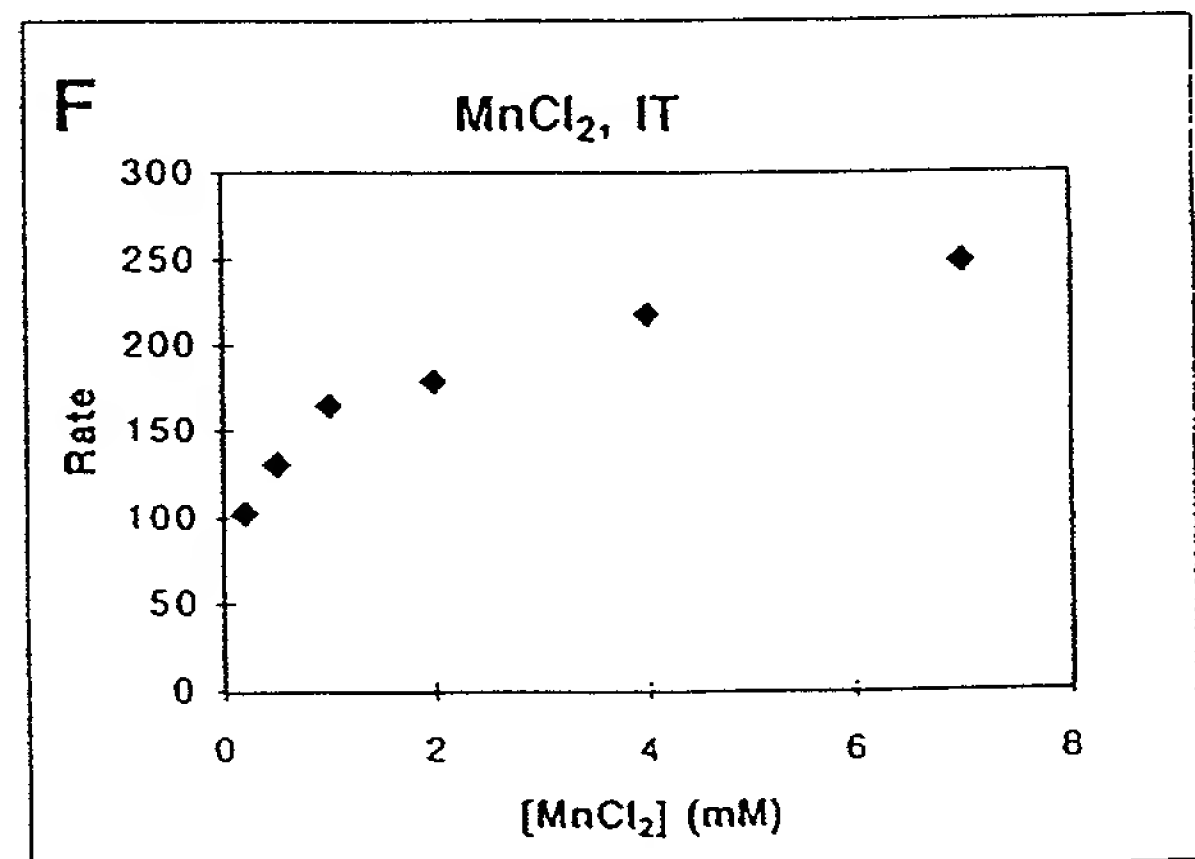
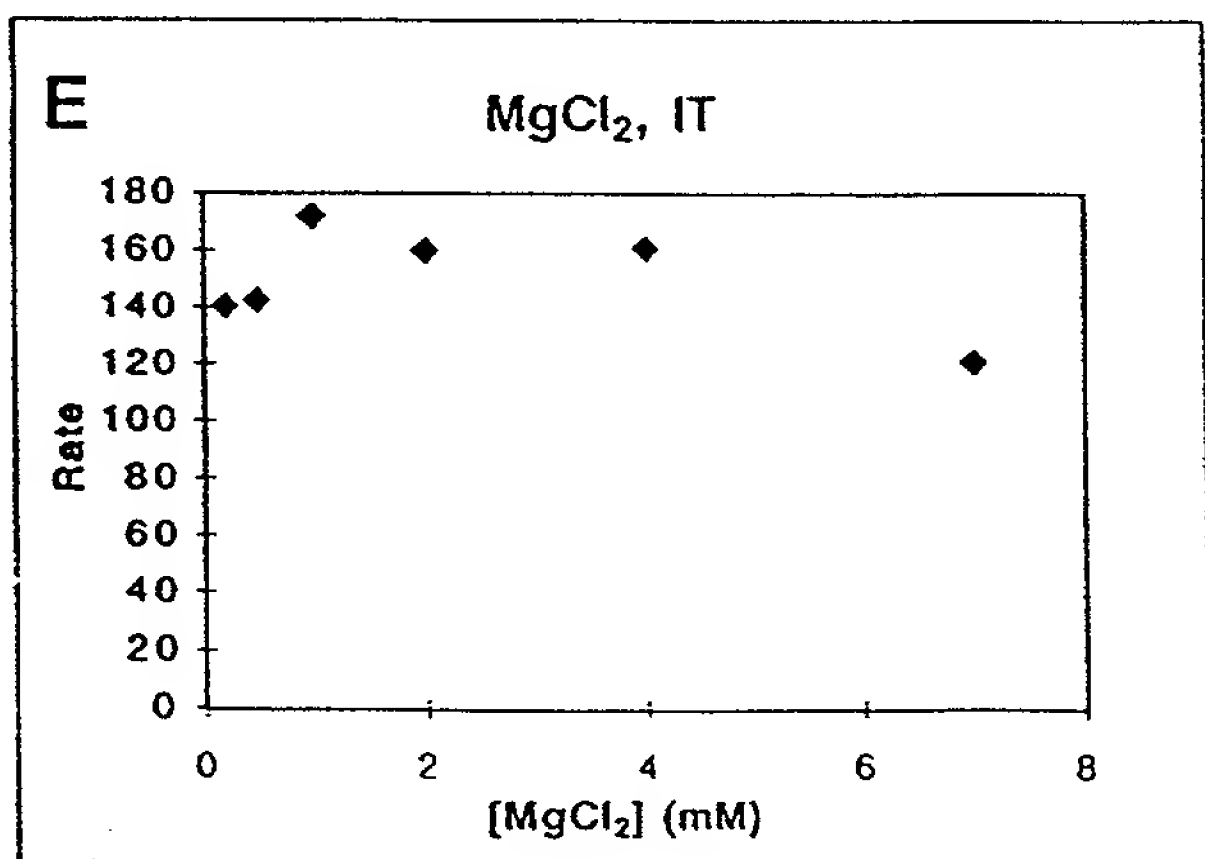
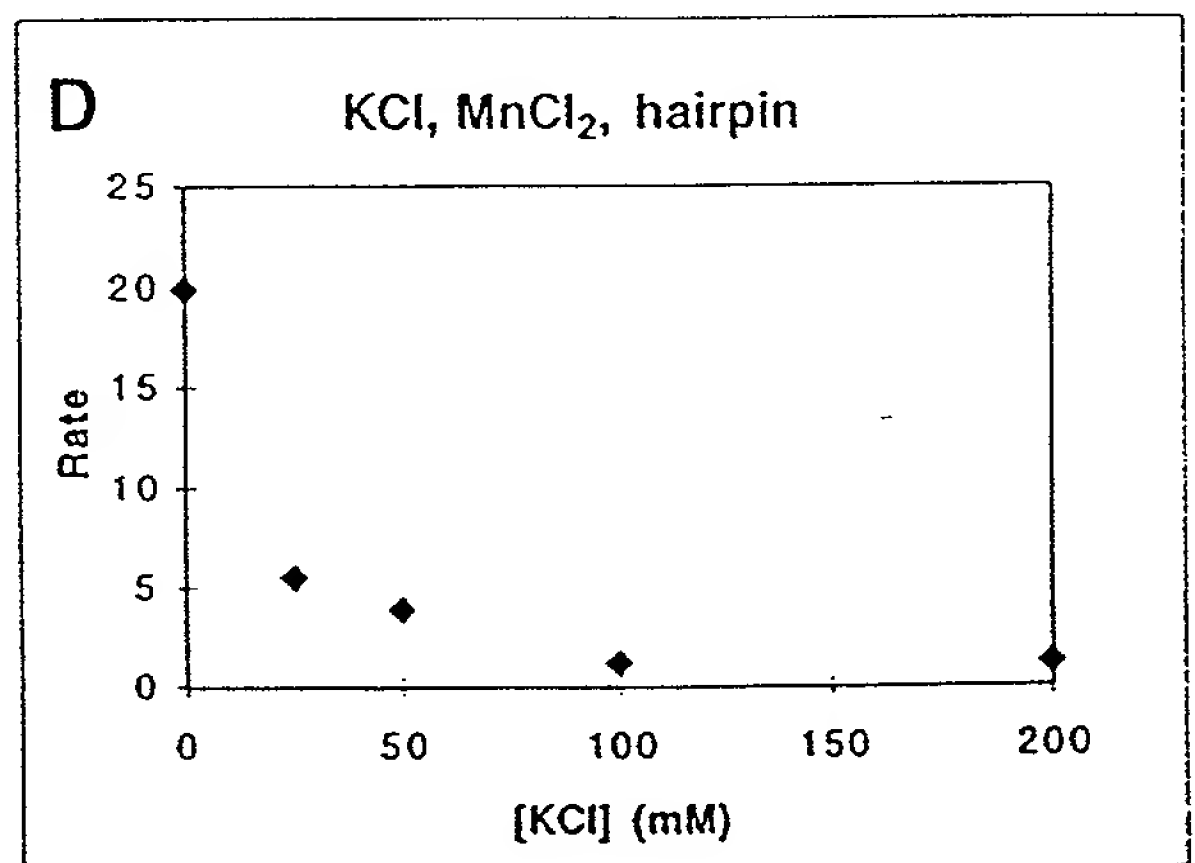
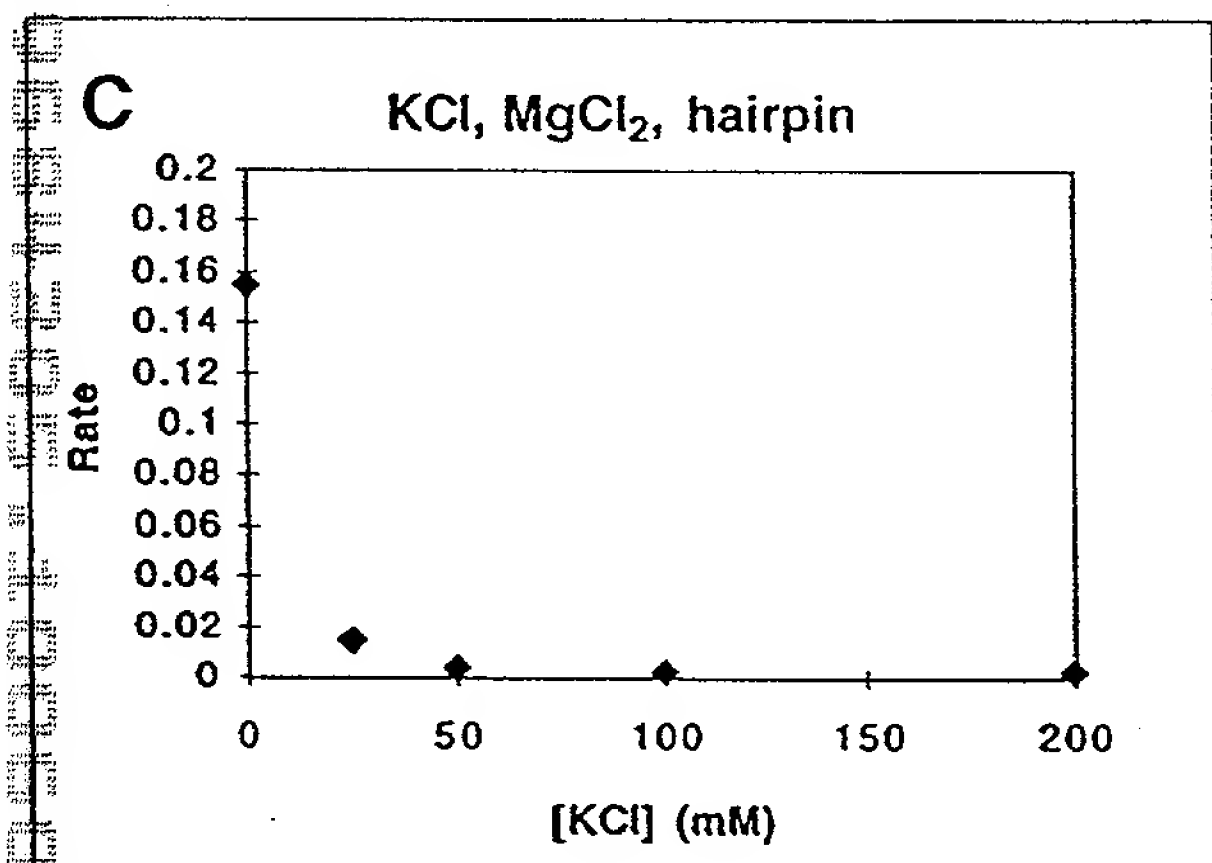
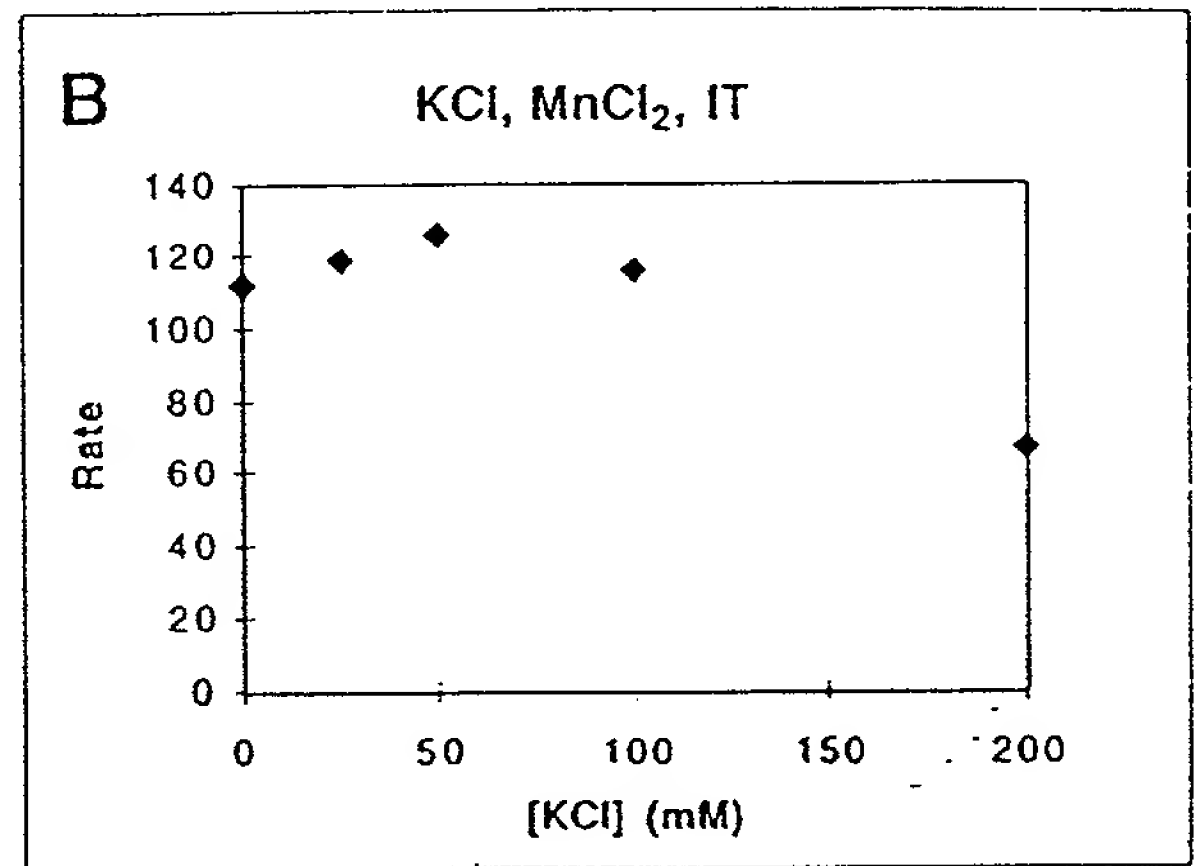
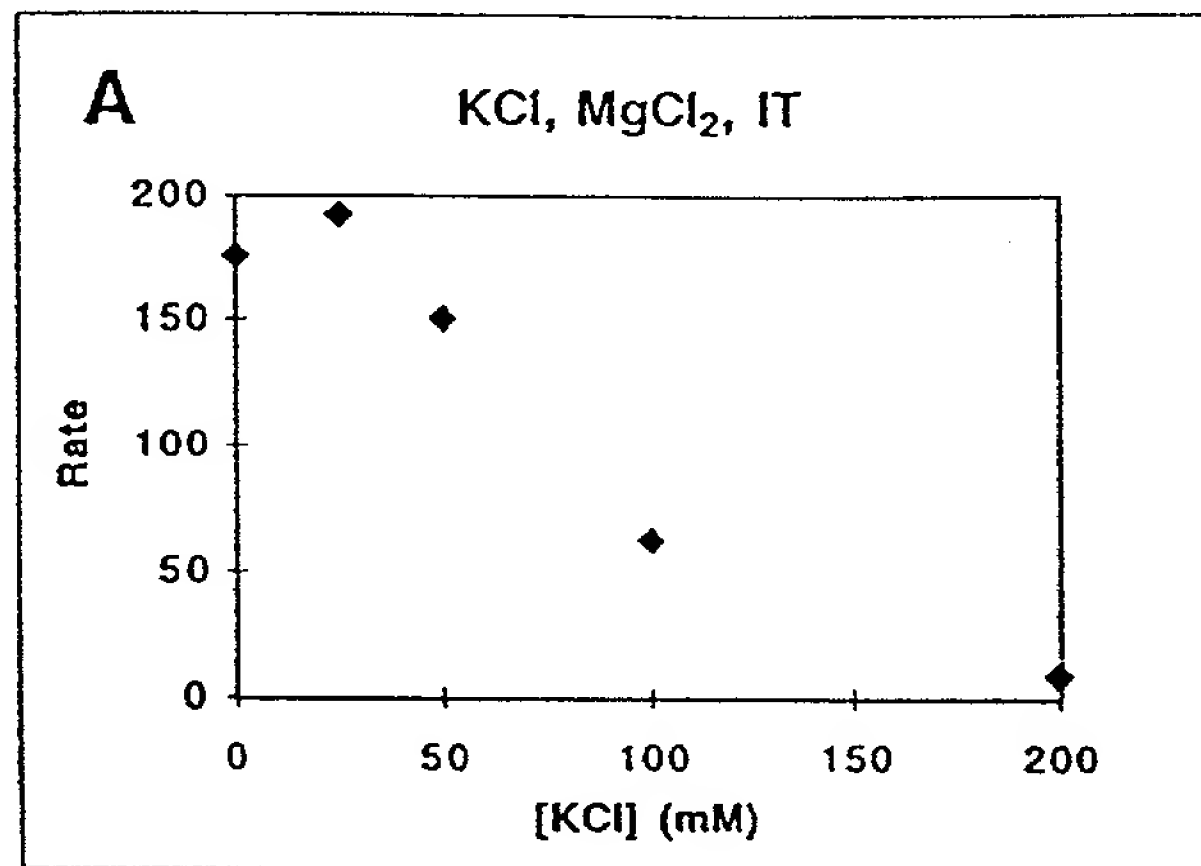


FIGURE 100 (cont.)

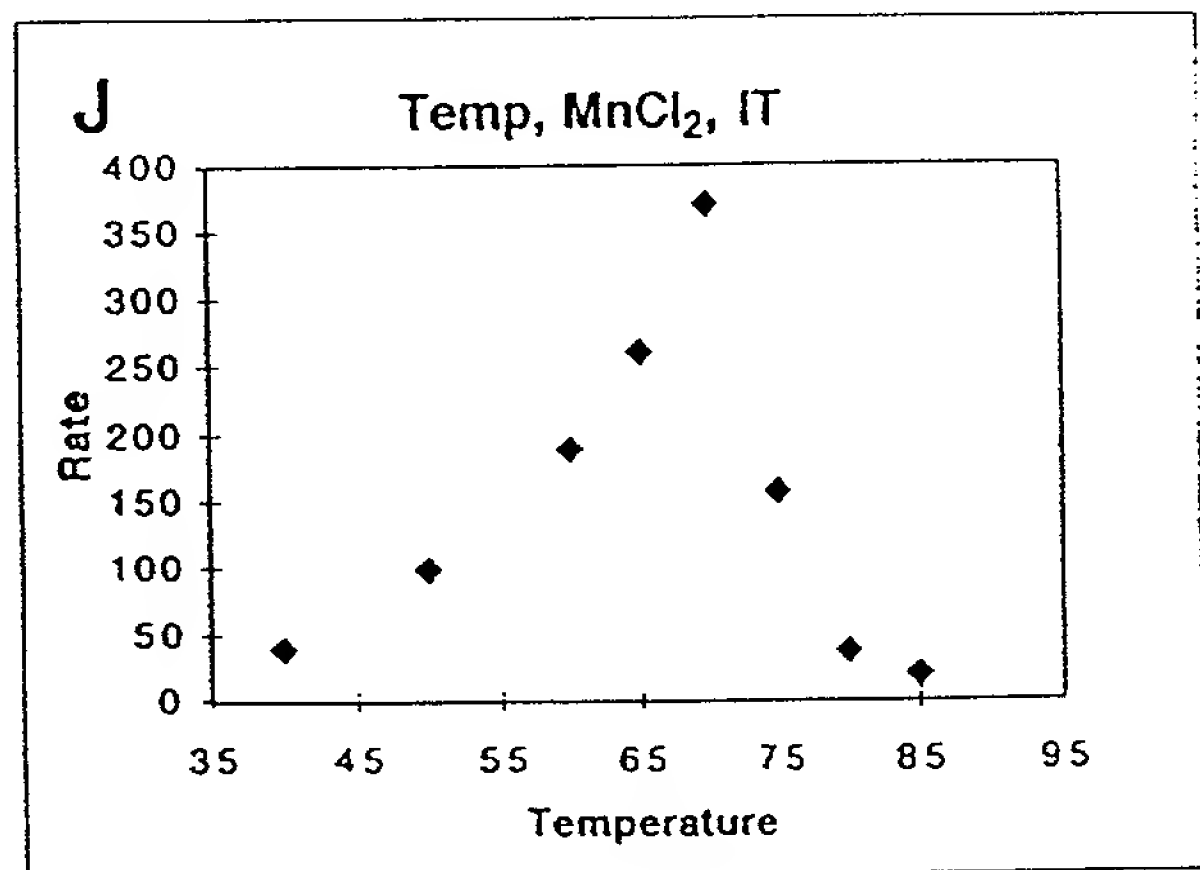
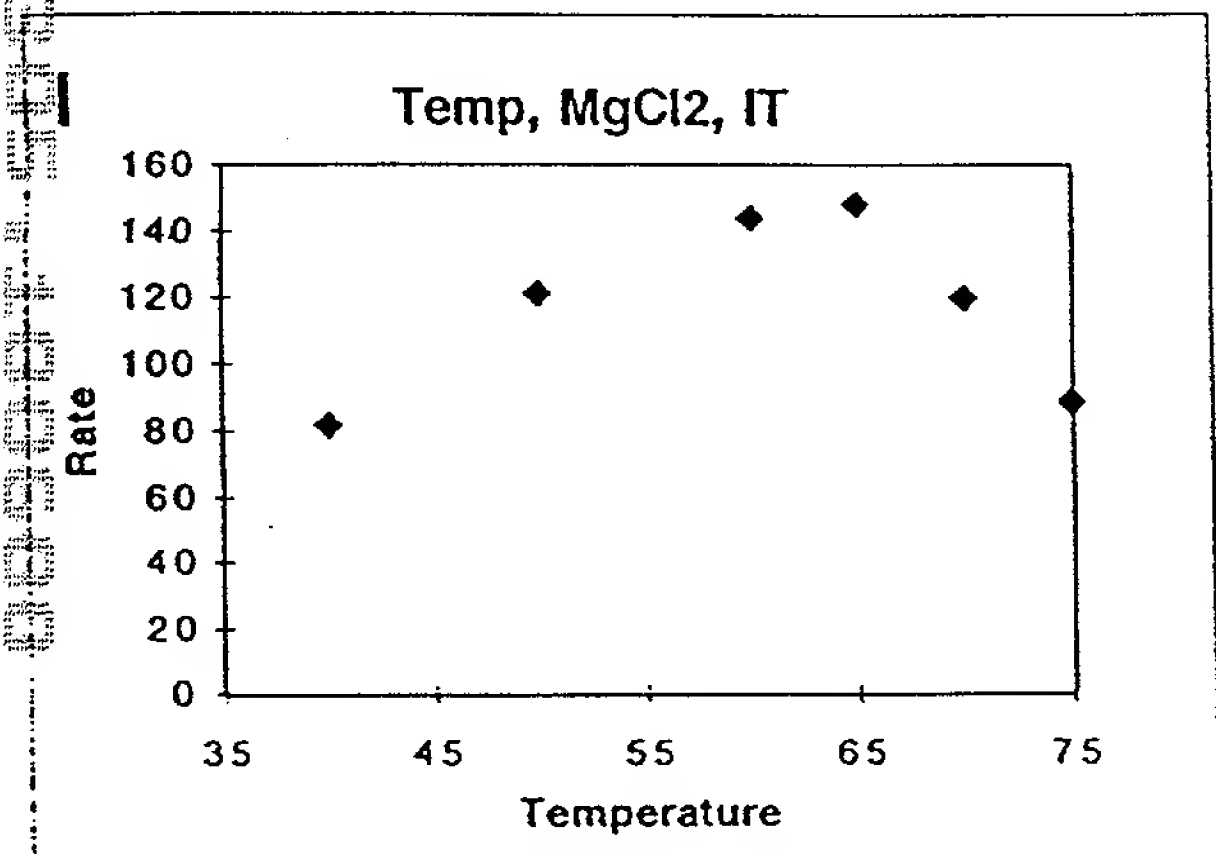
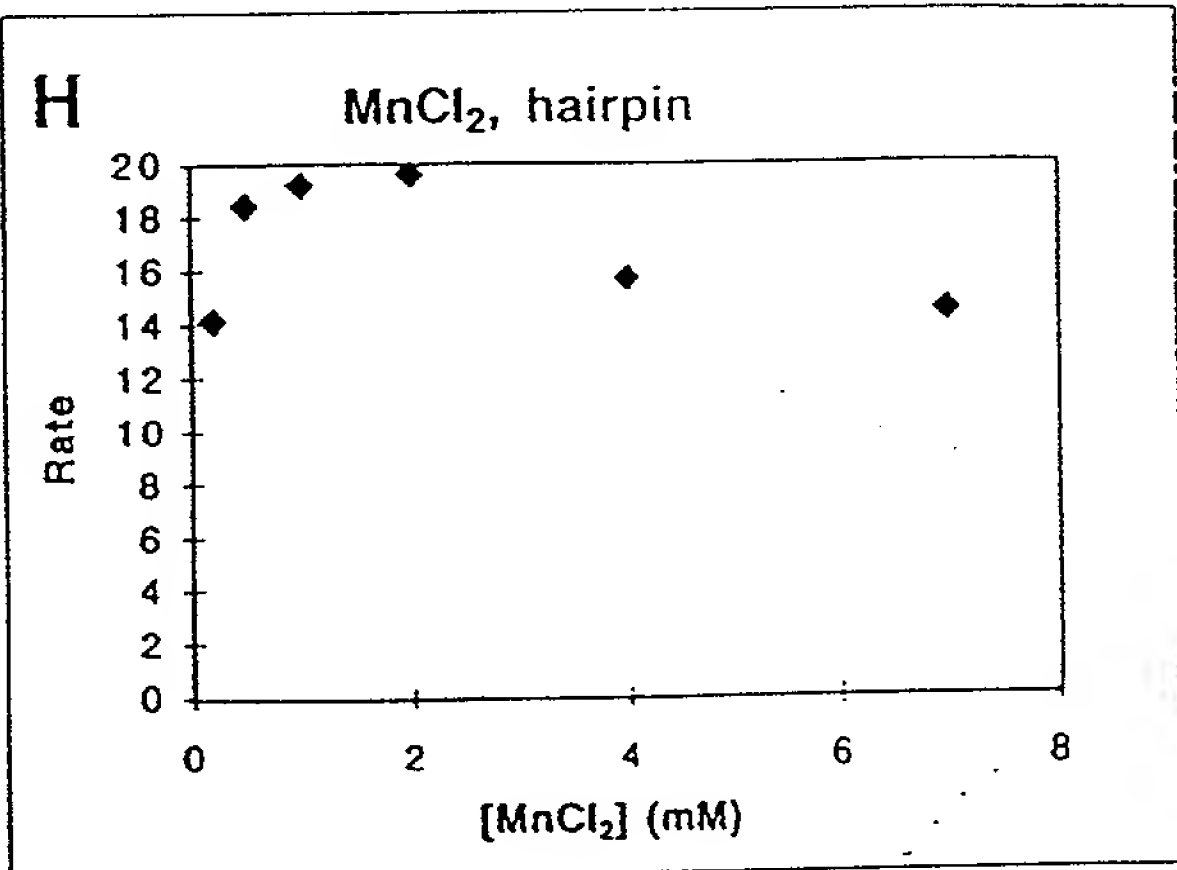
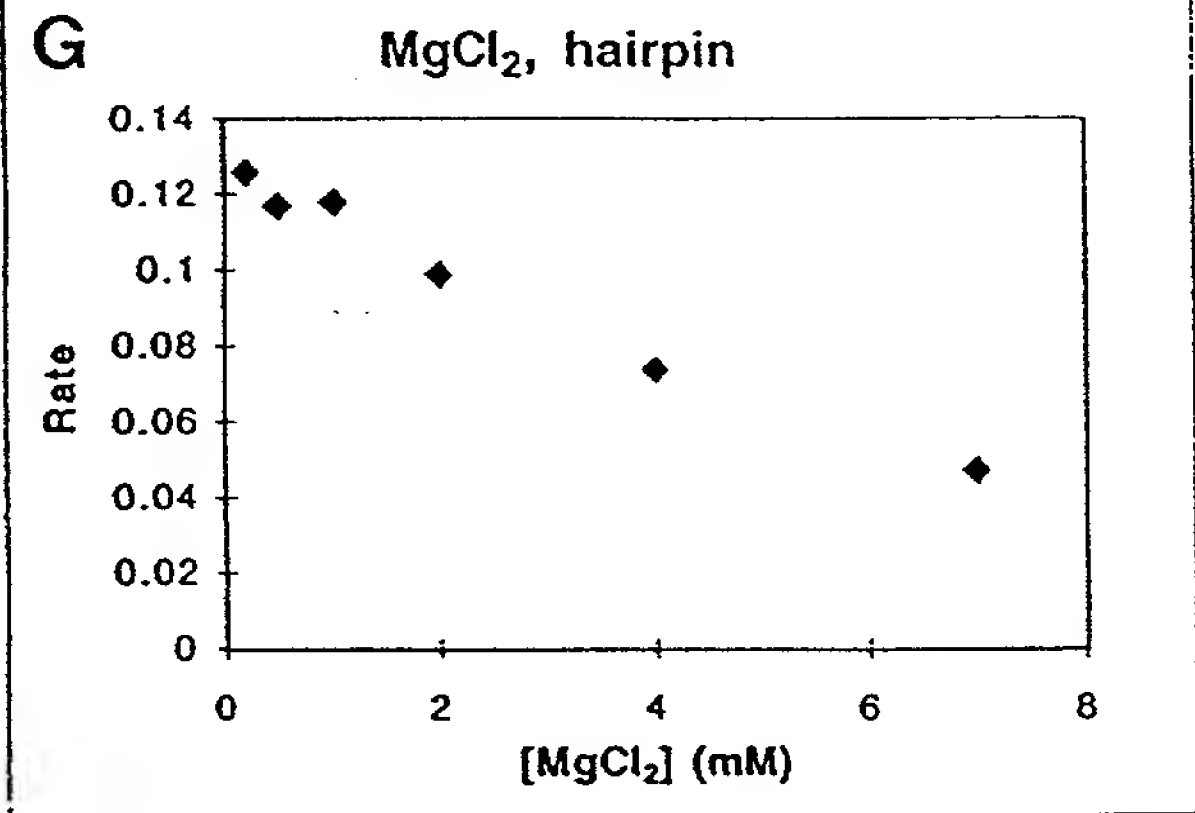
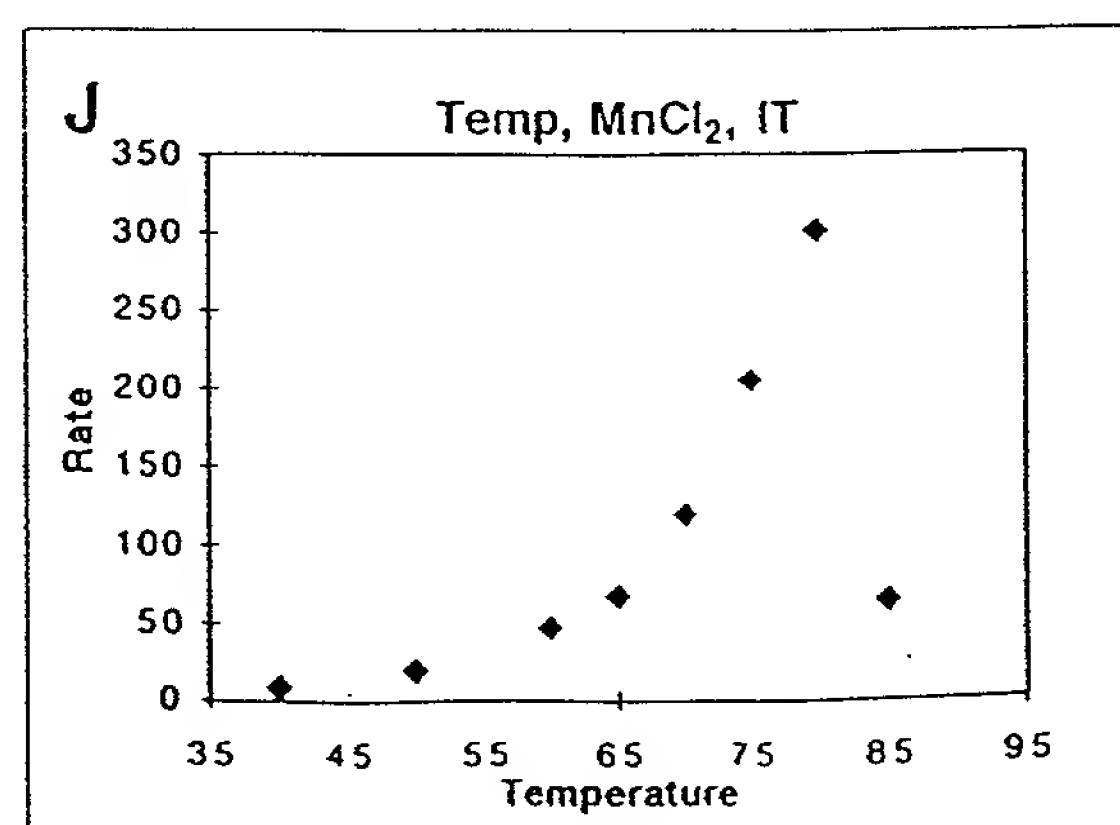
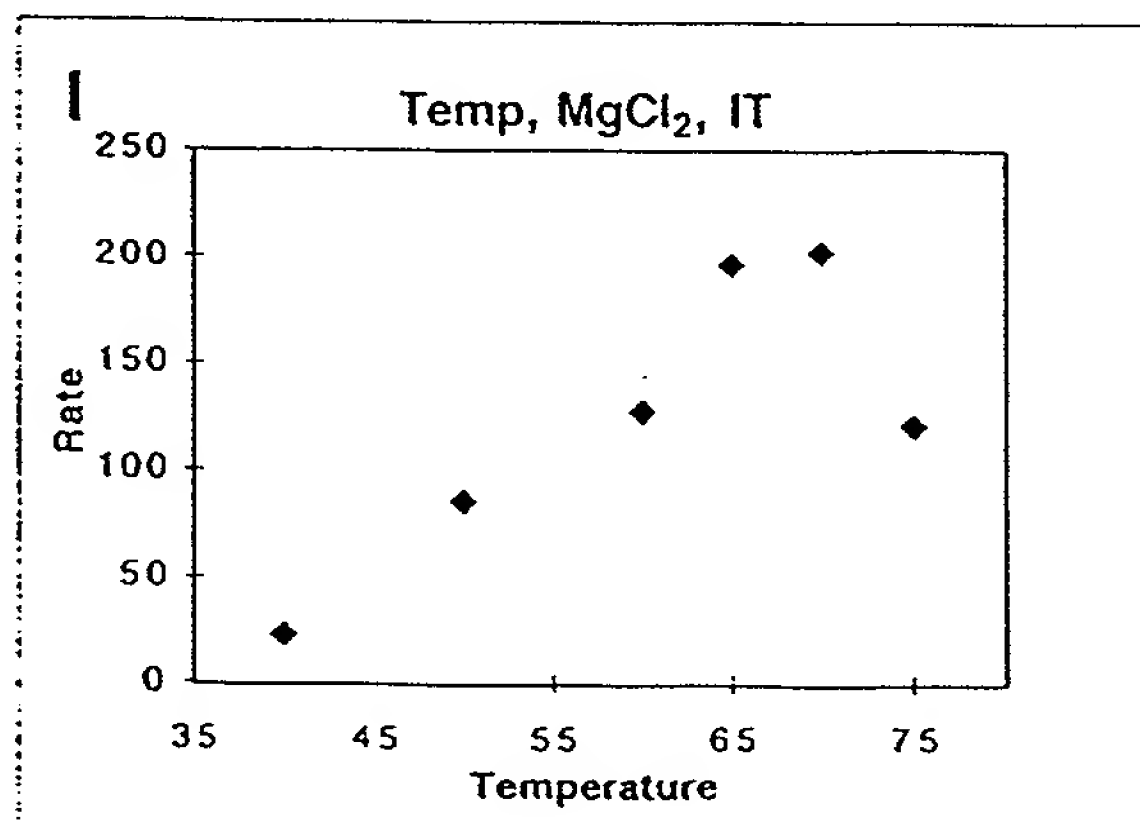
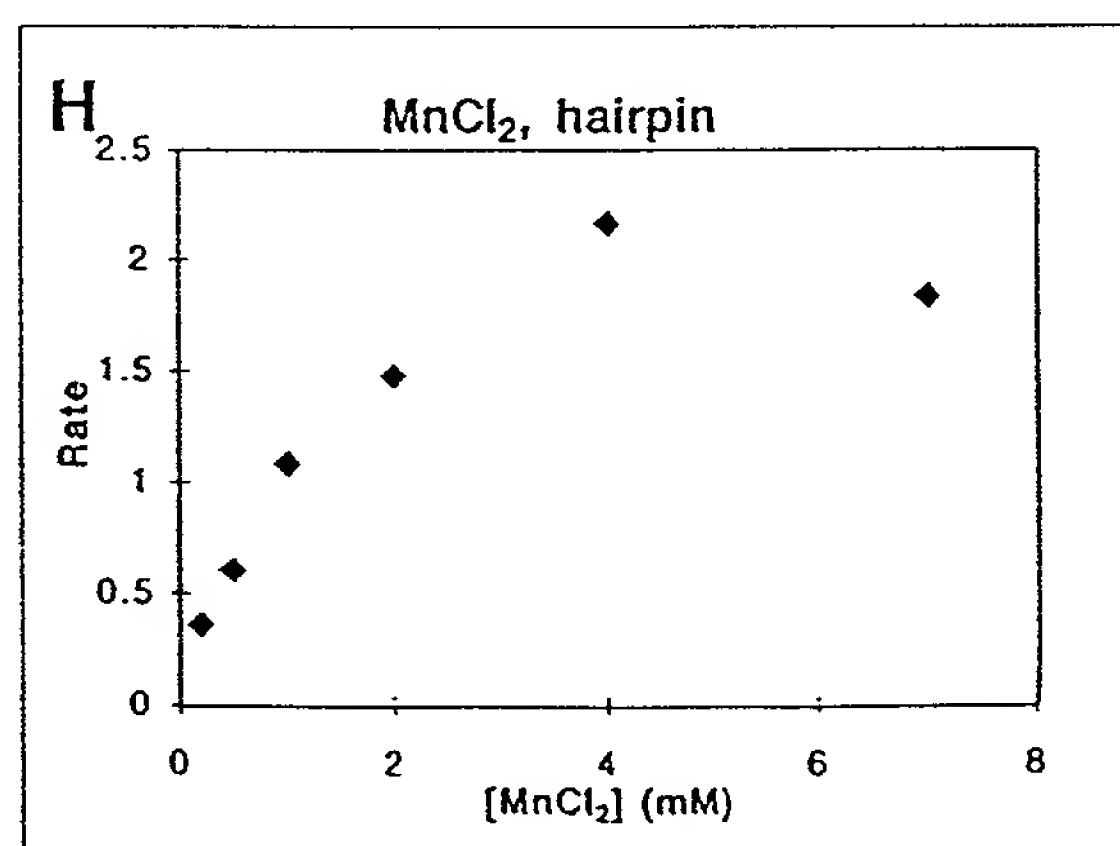
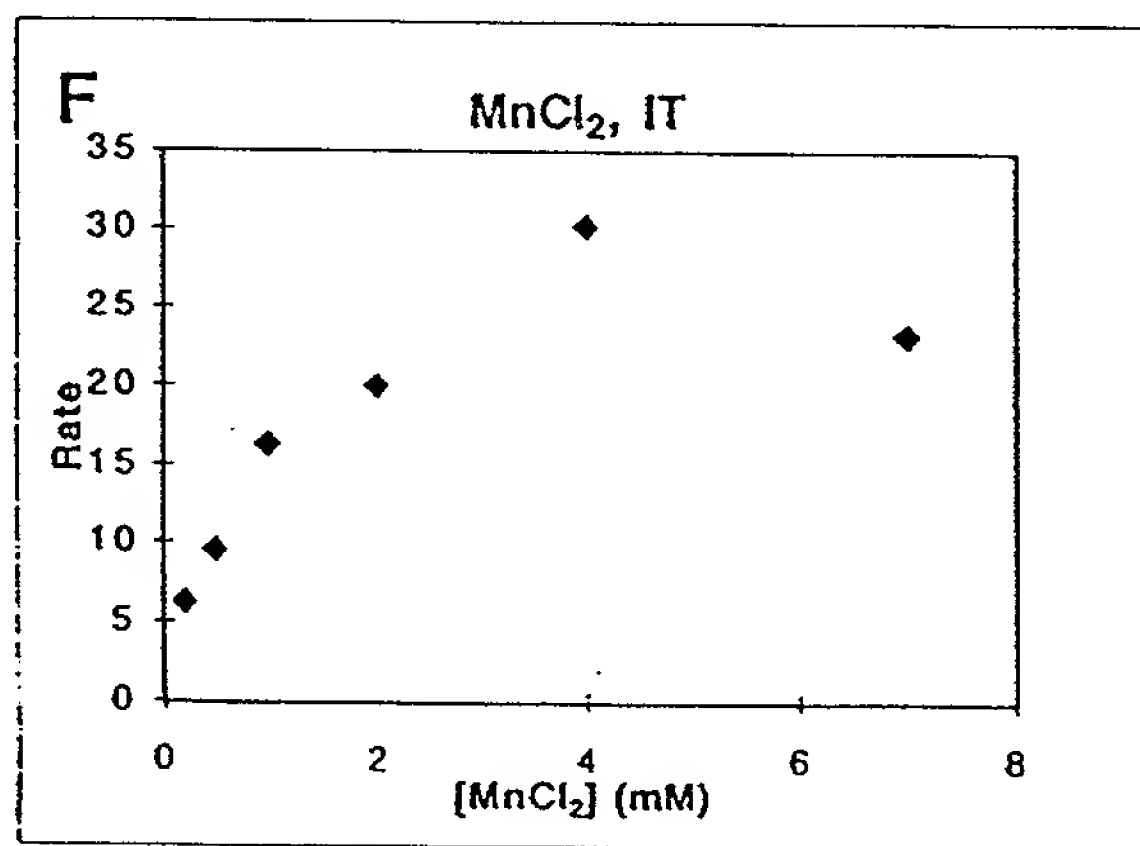
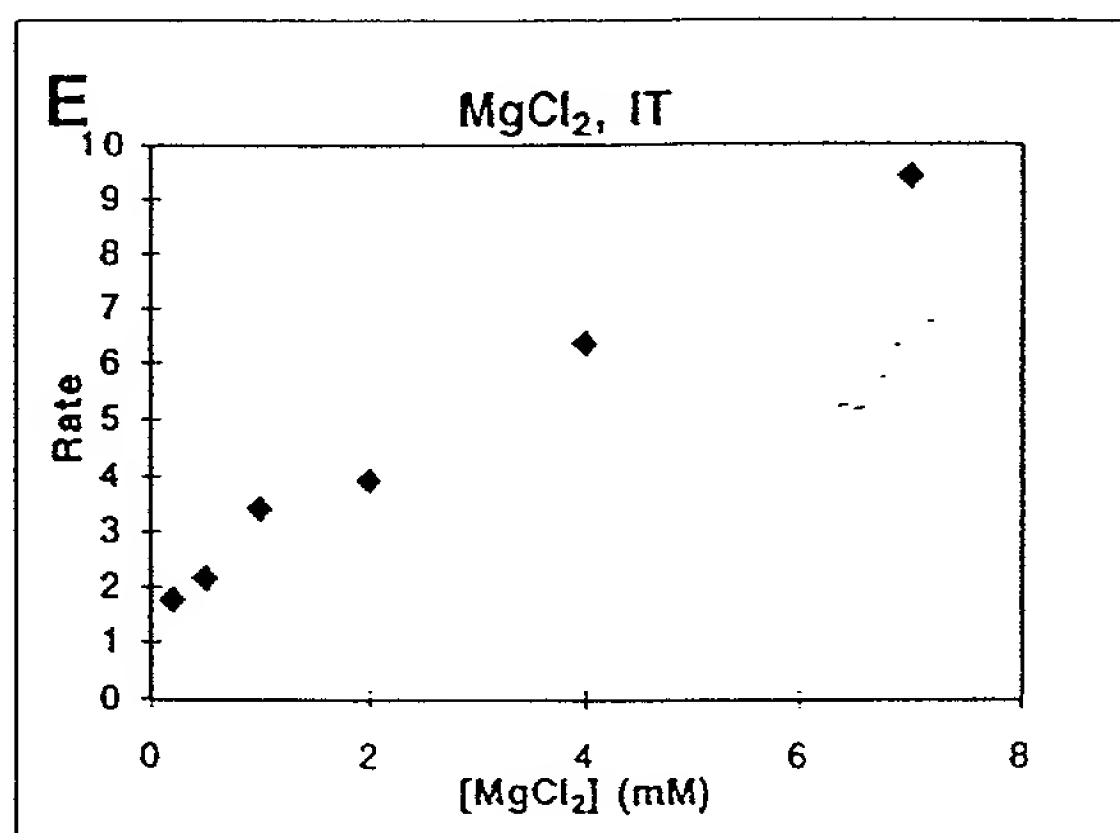
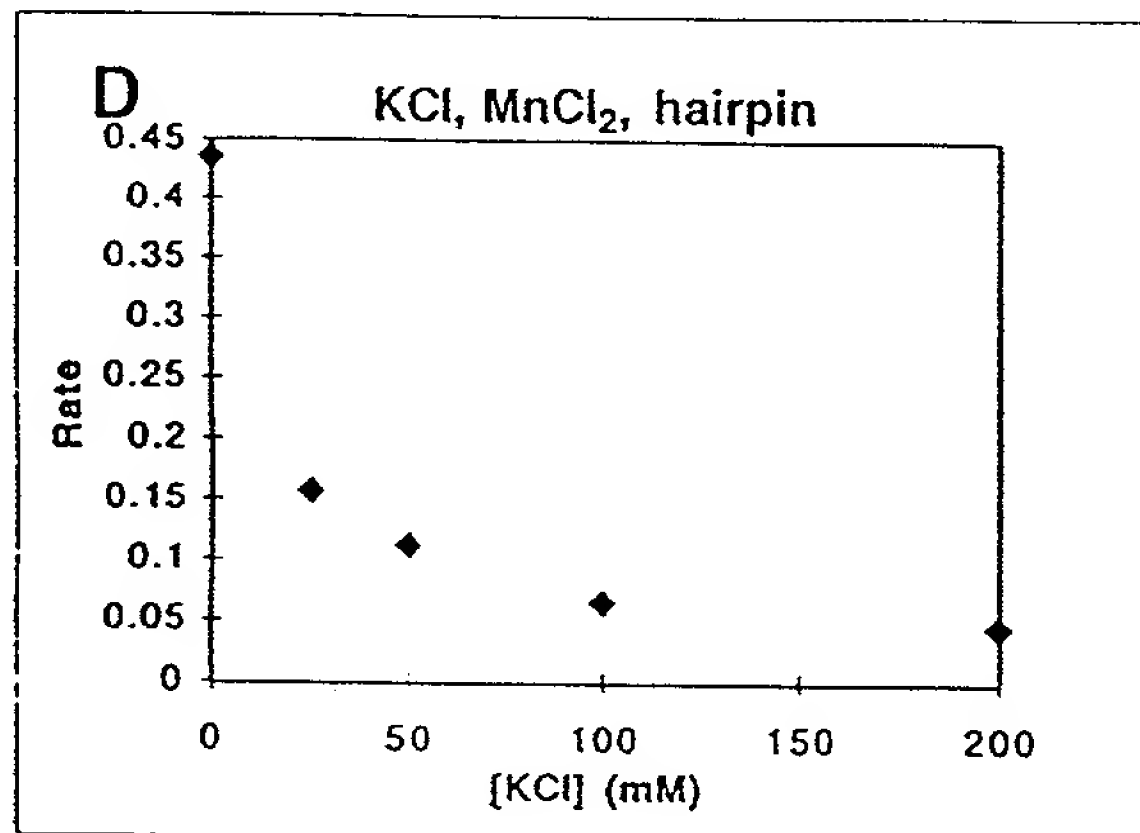
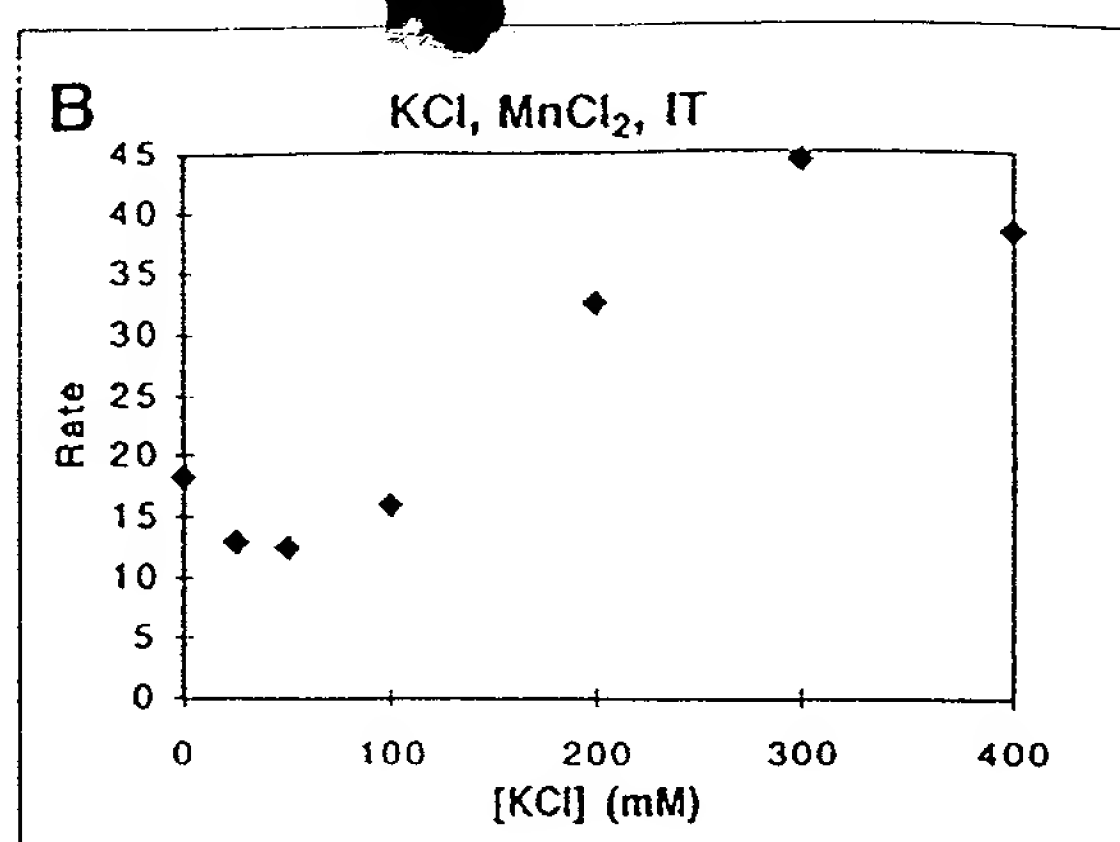
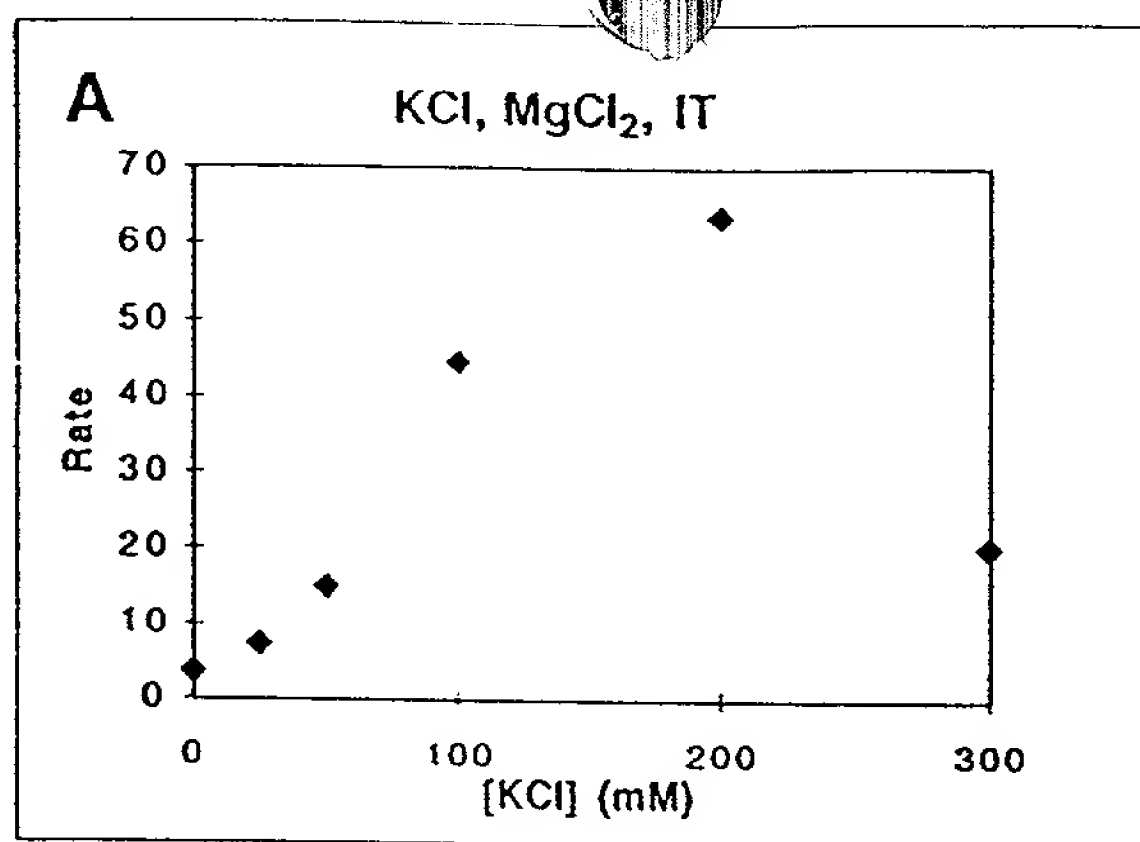
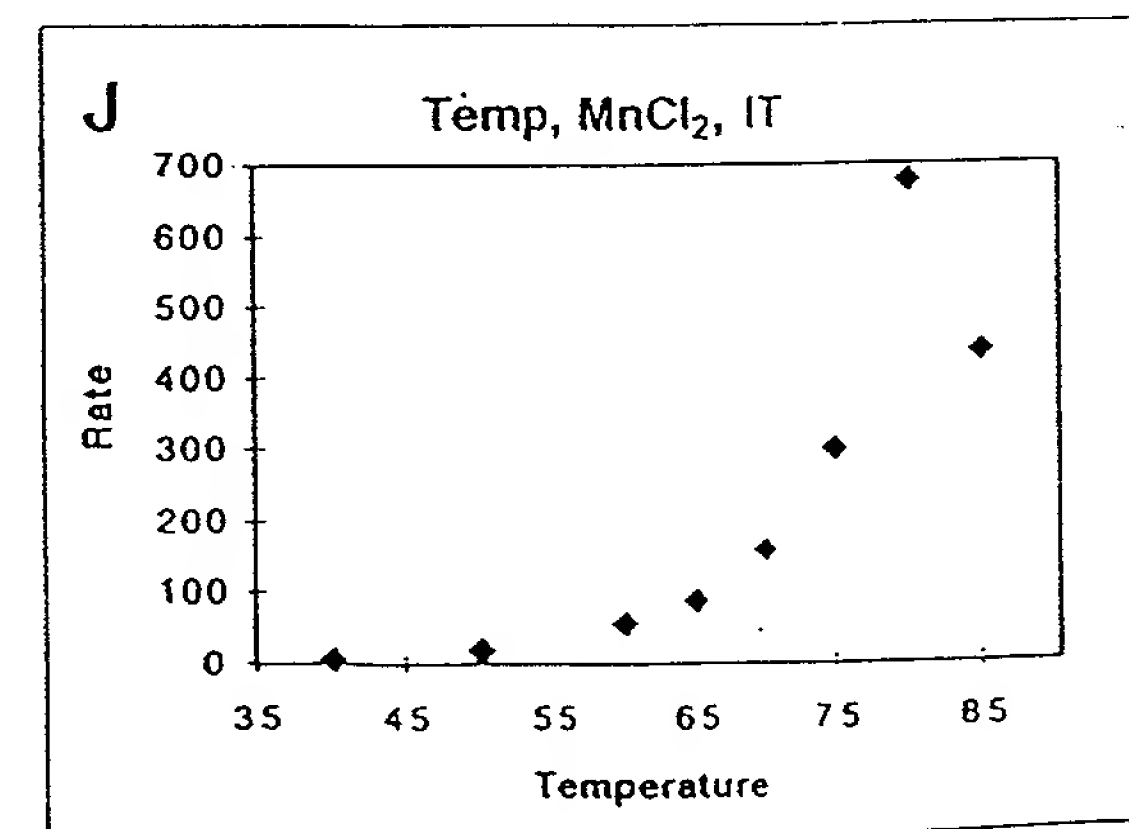
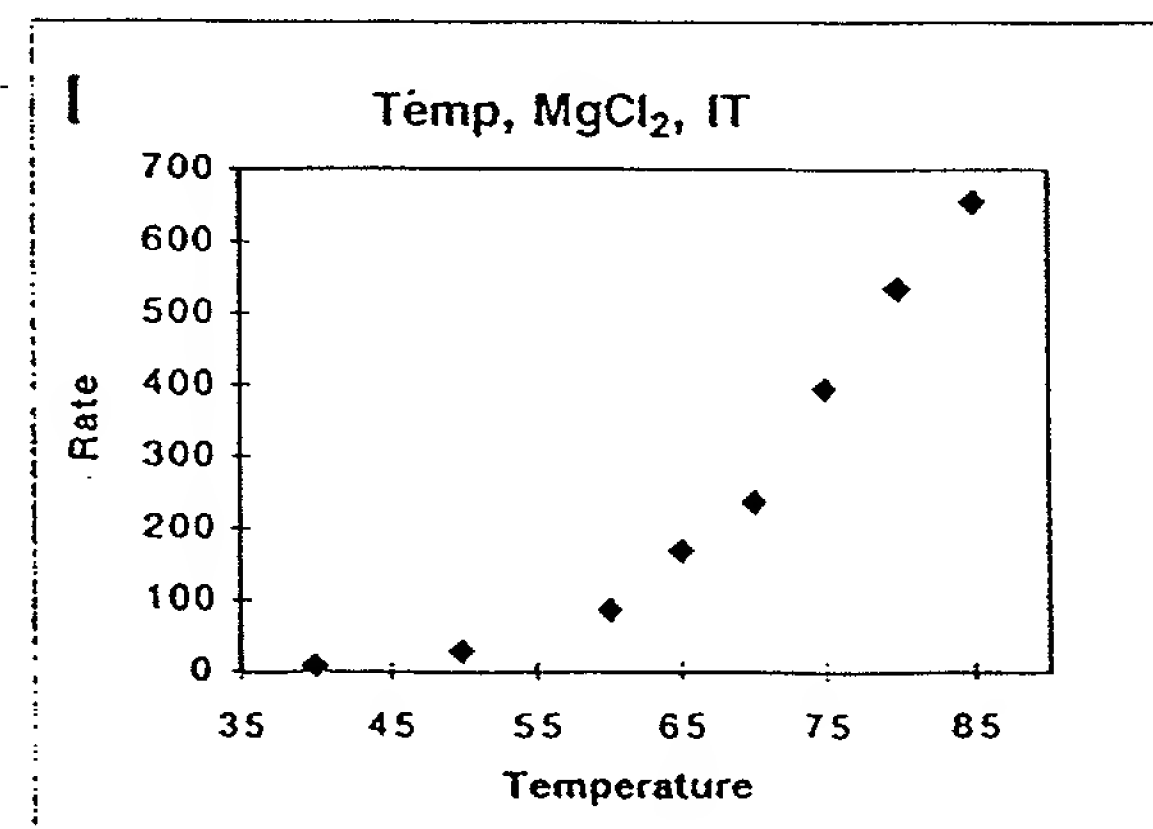
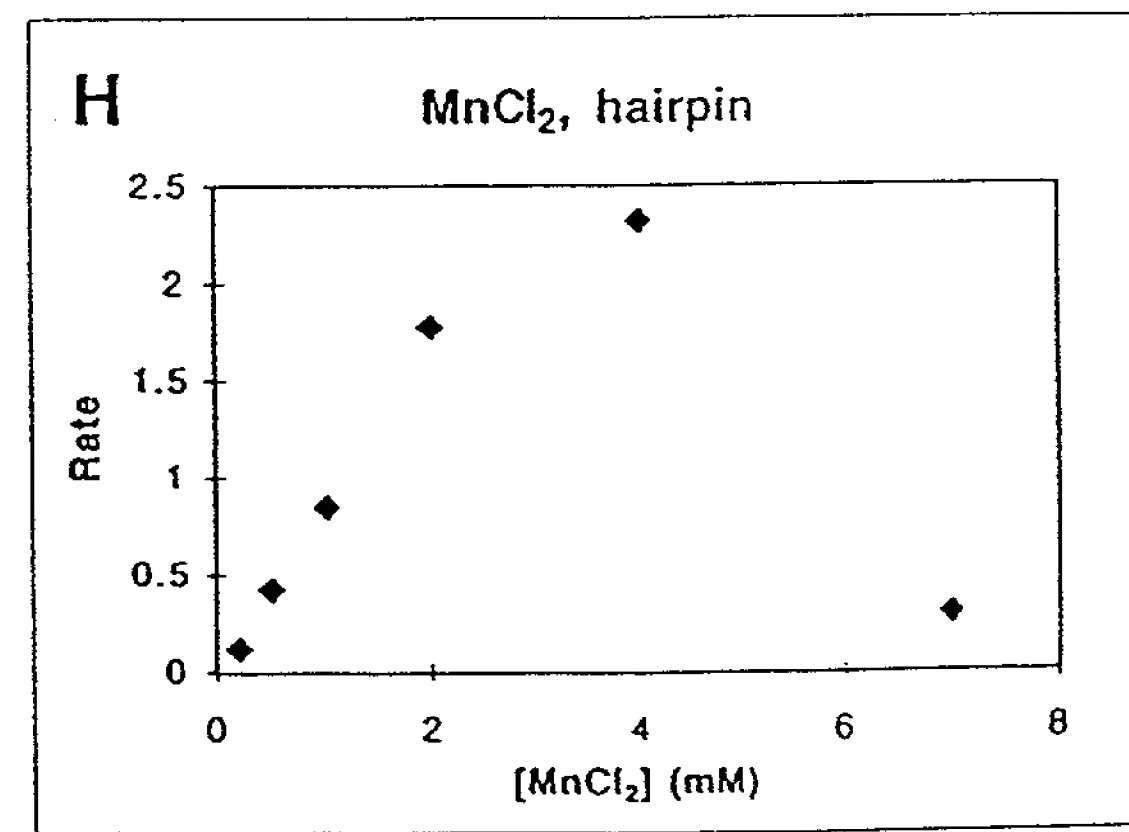
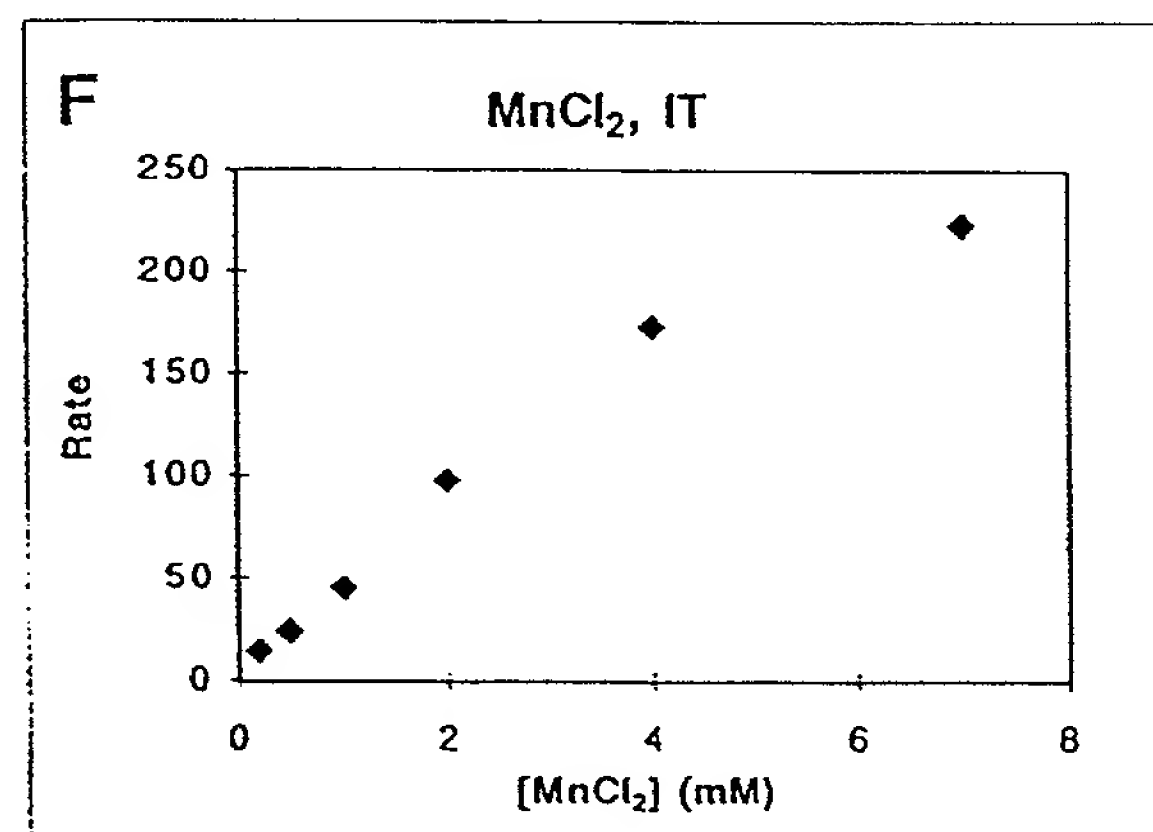
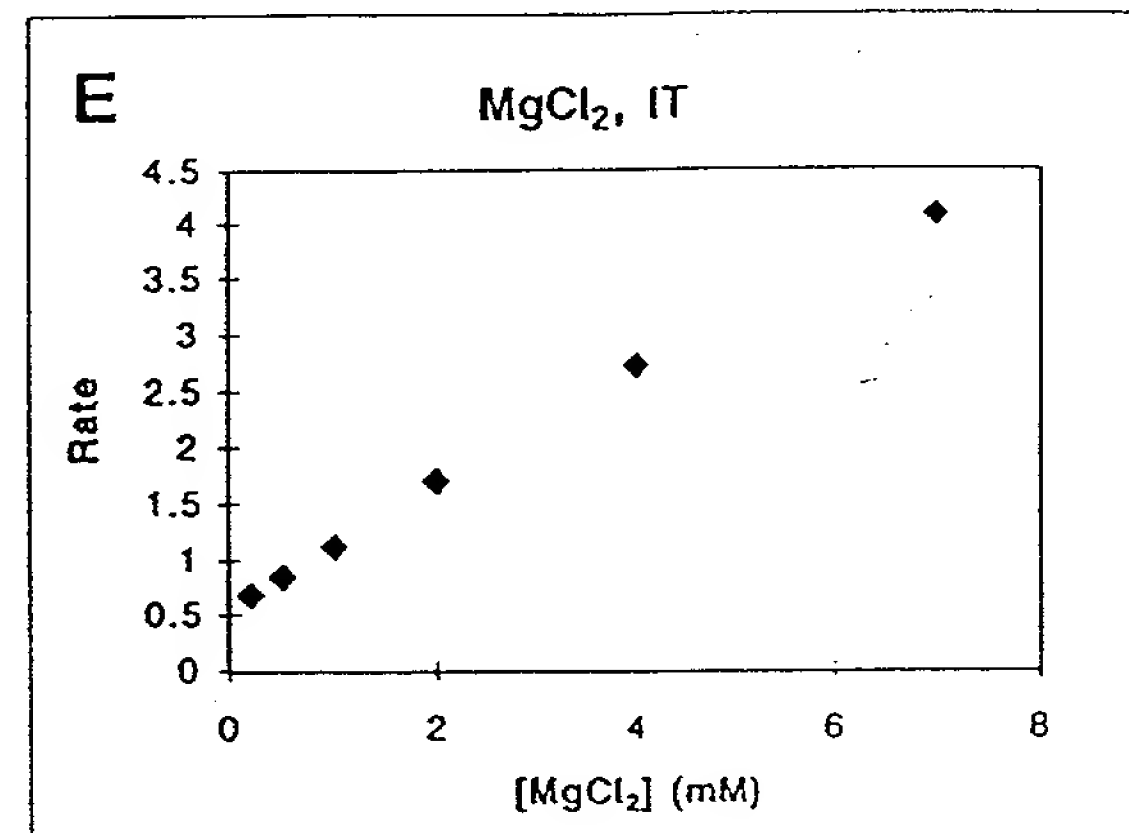
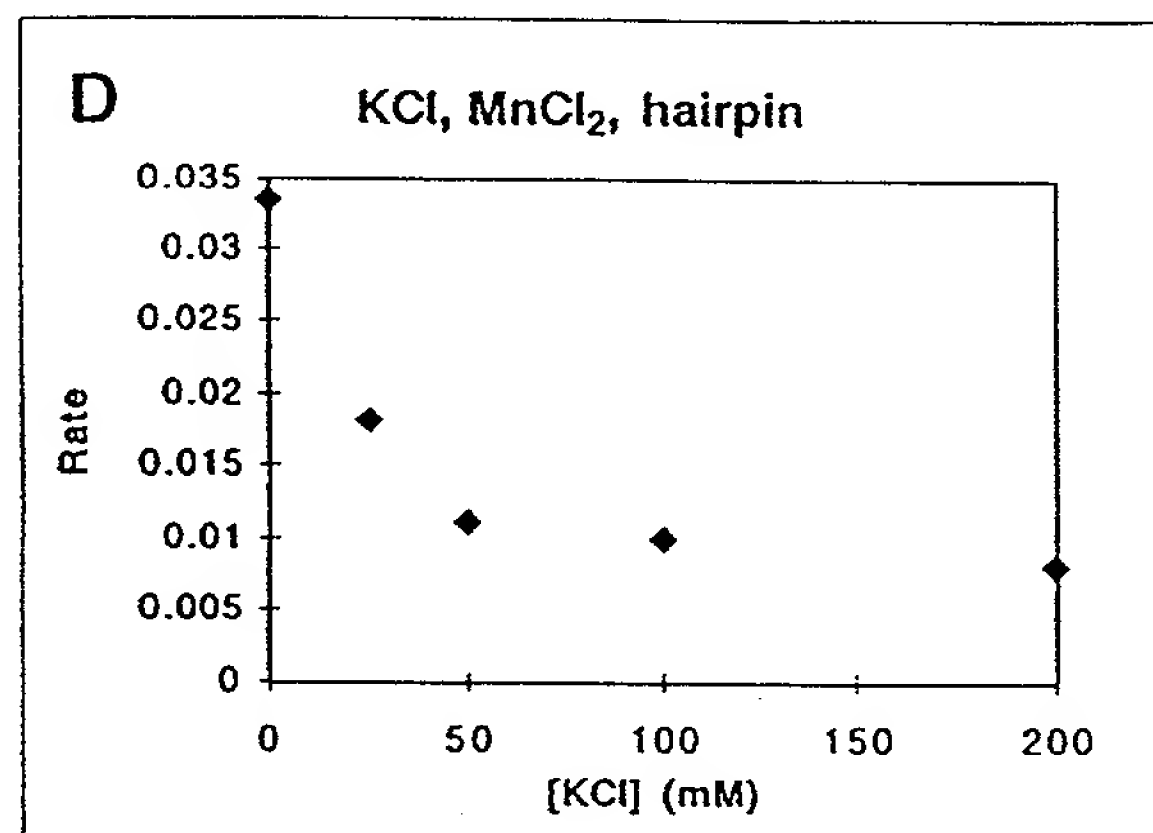
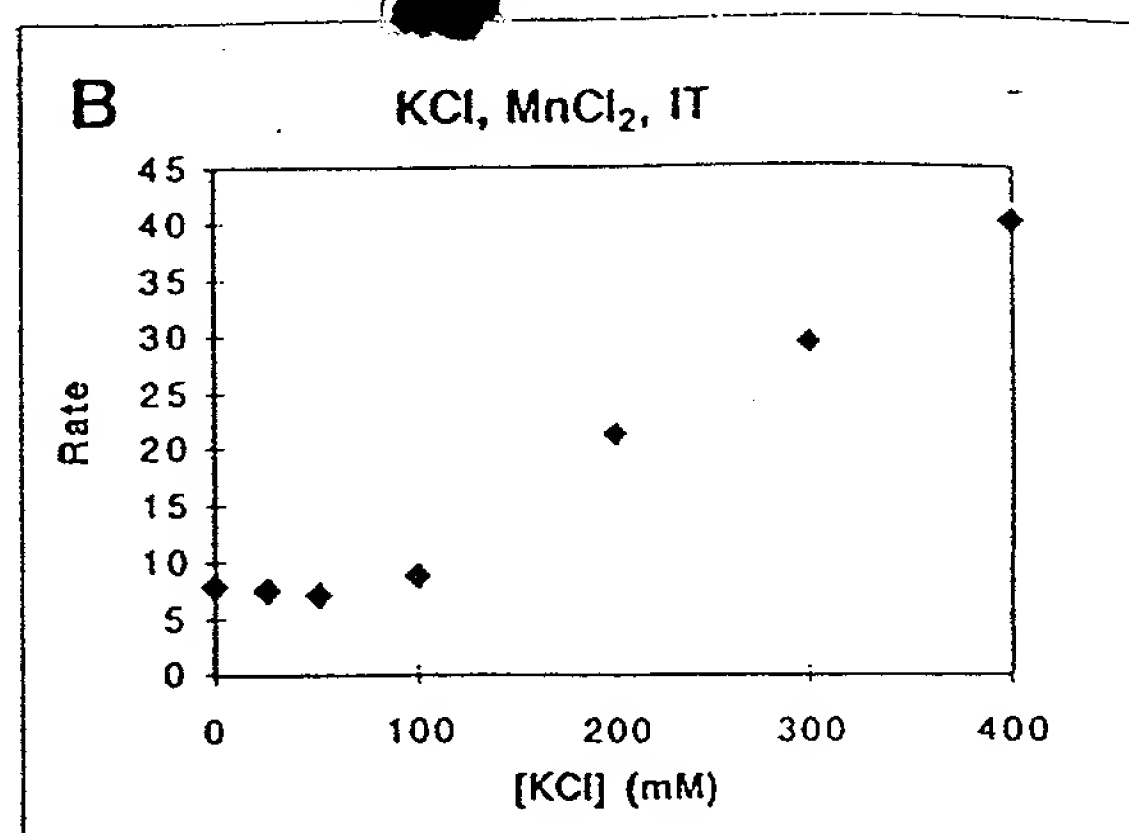
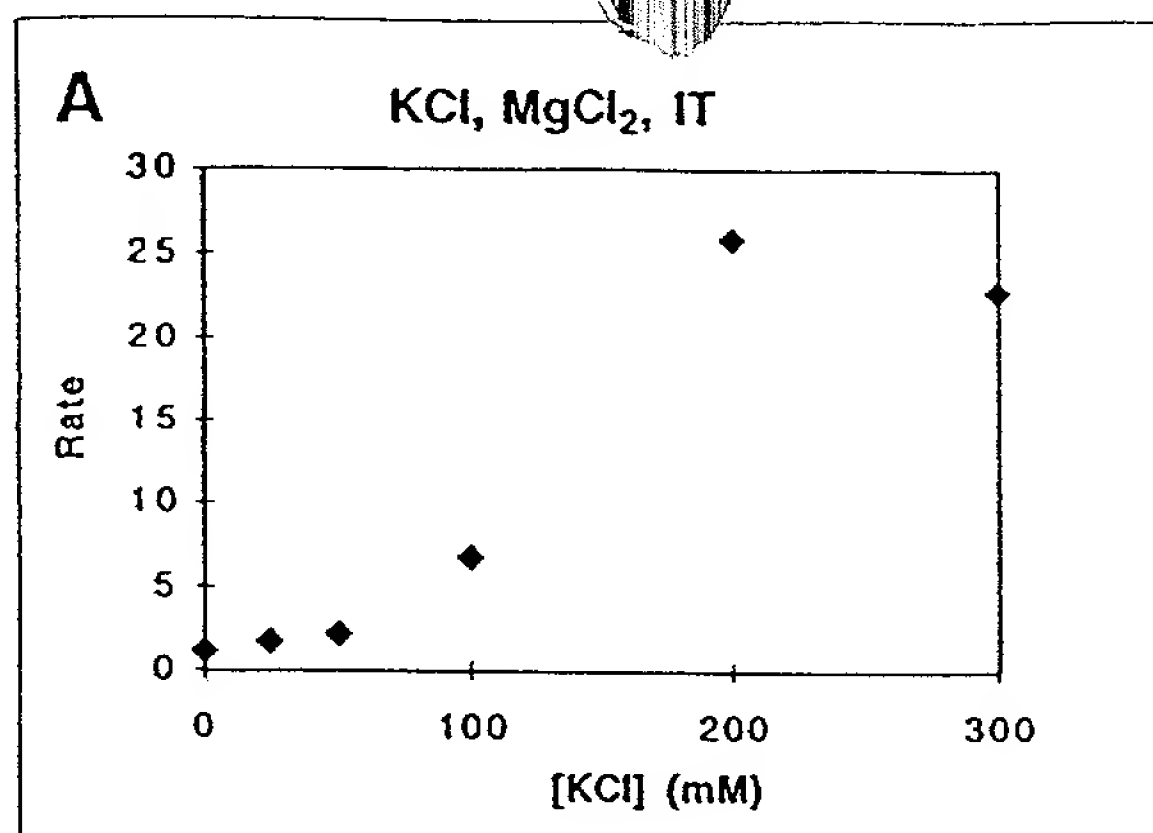


FIGURE 101



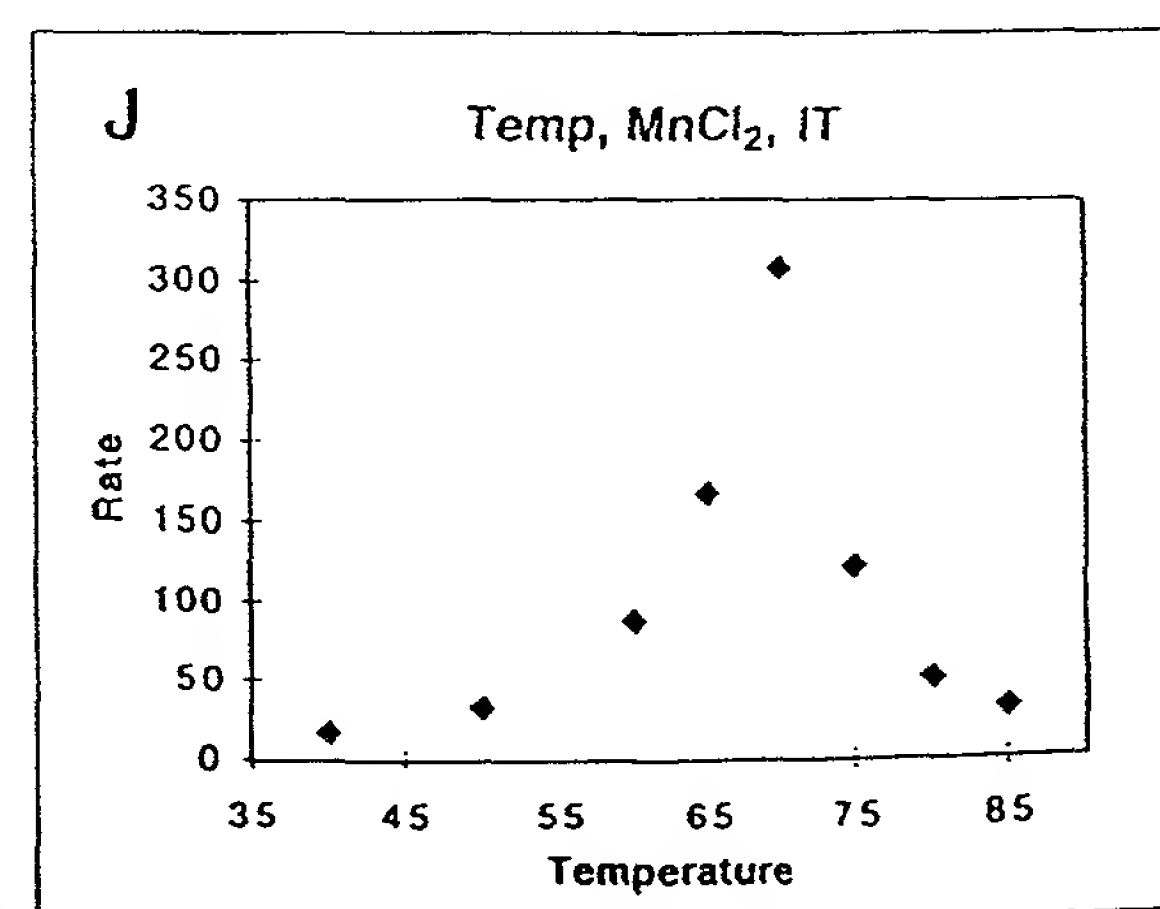
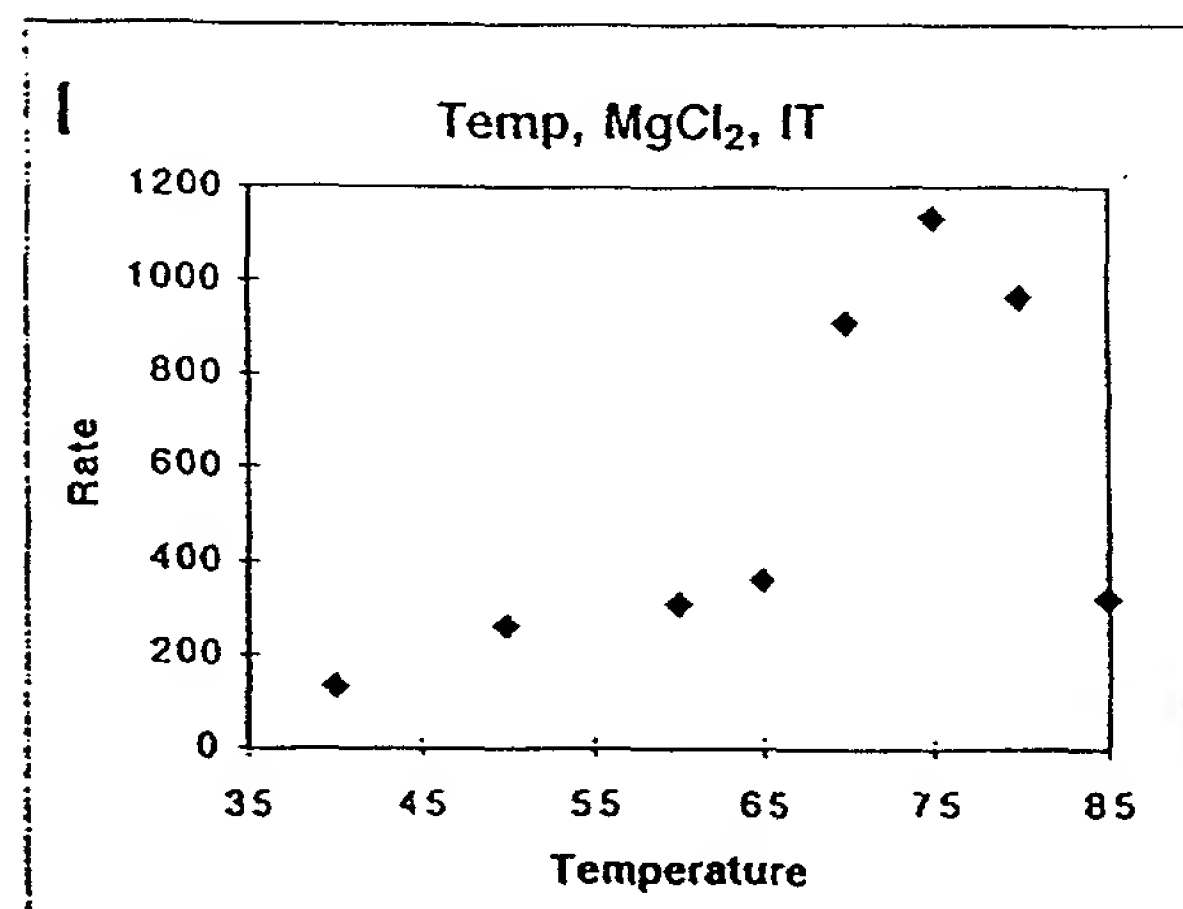
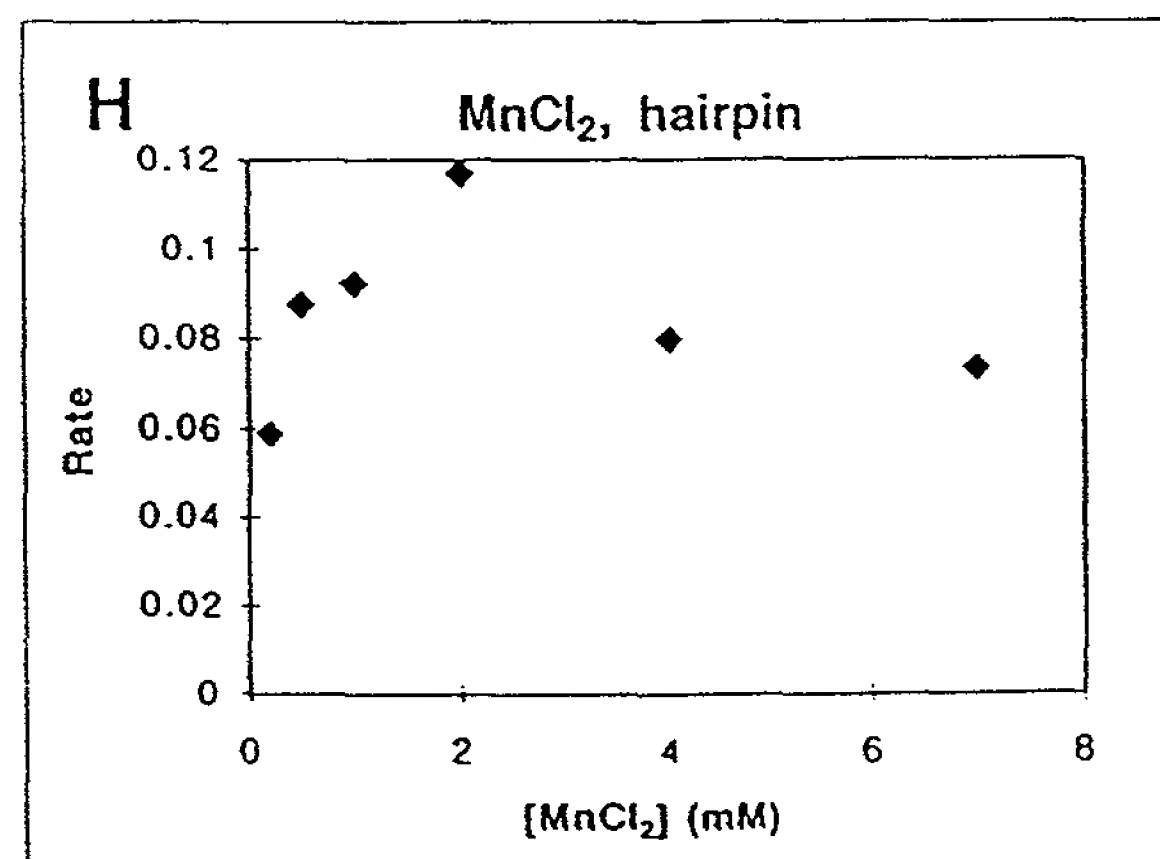
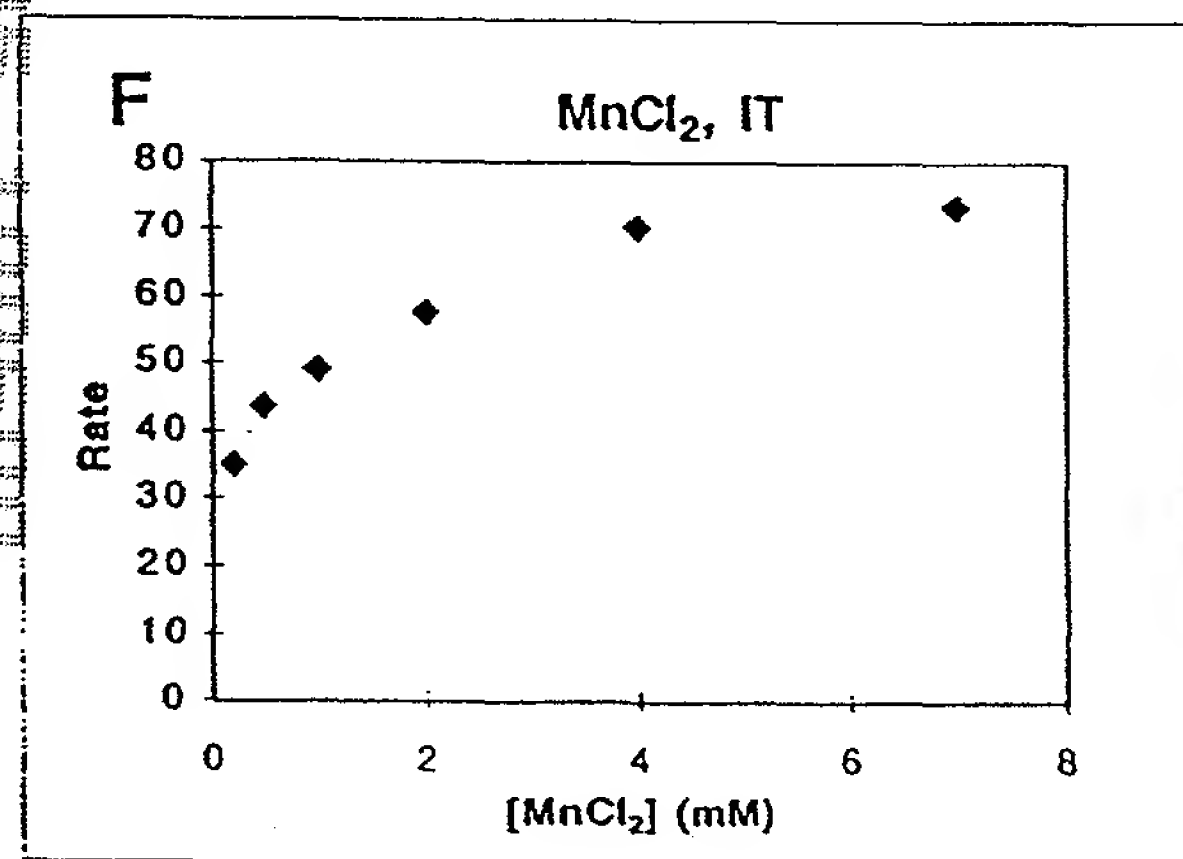
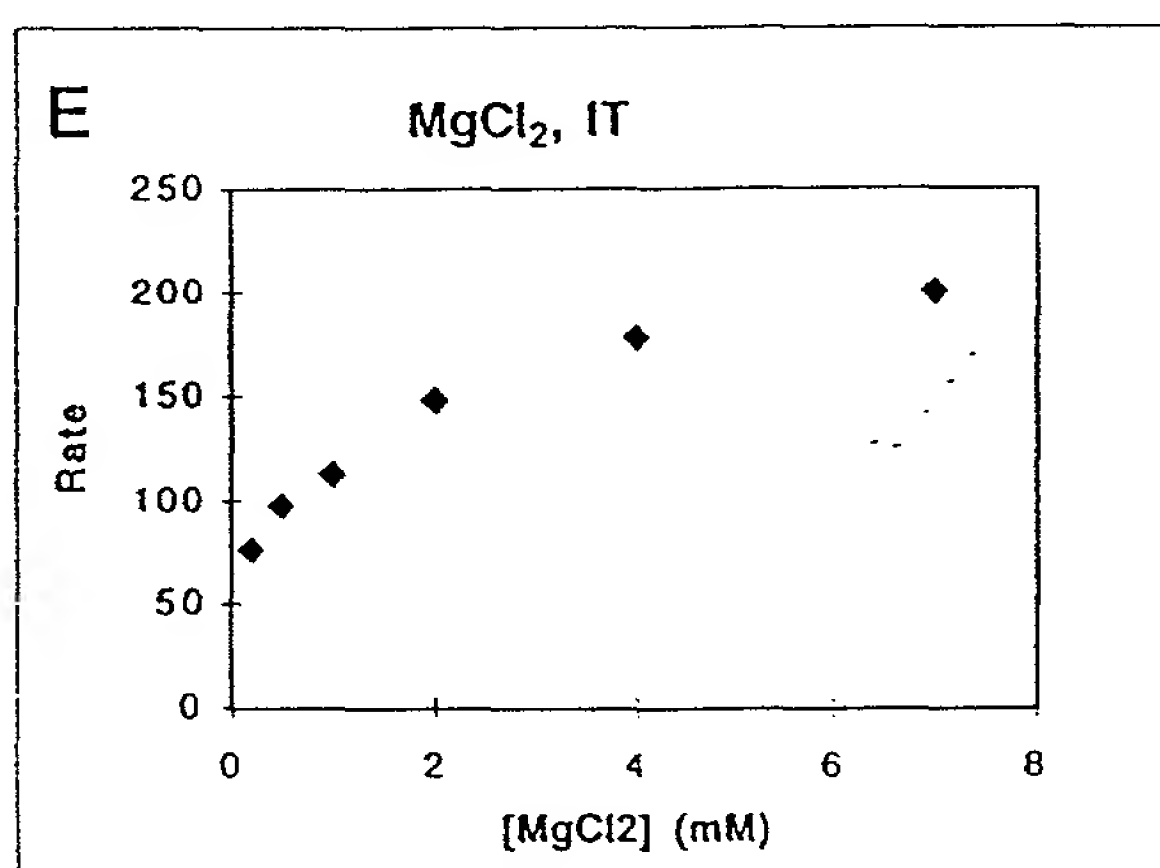
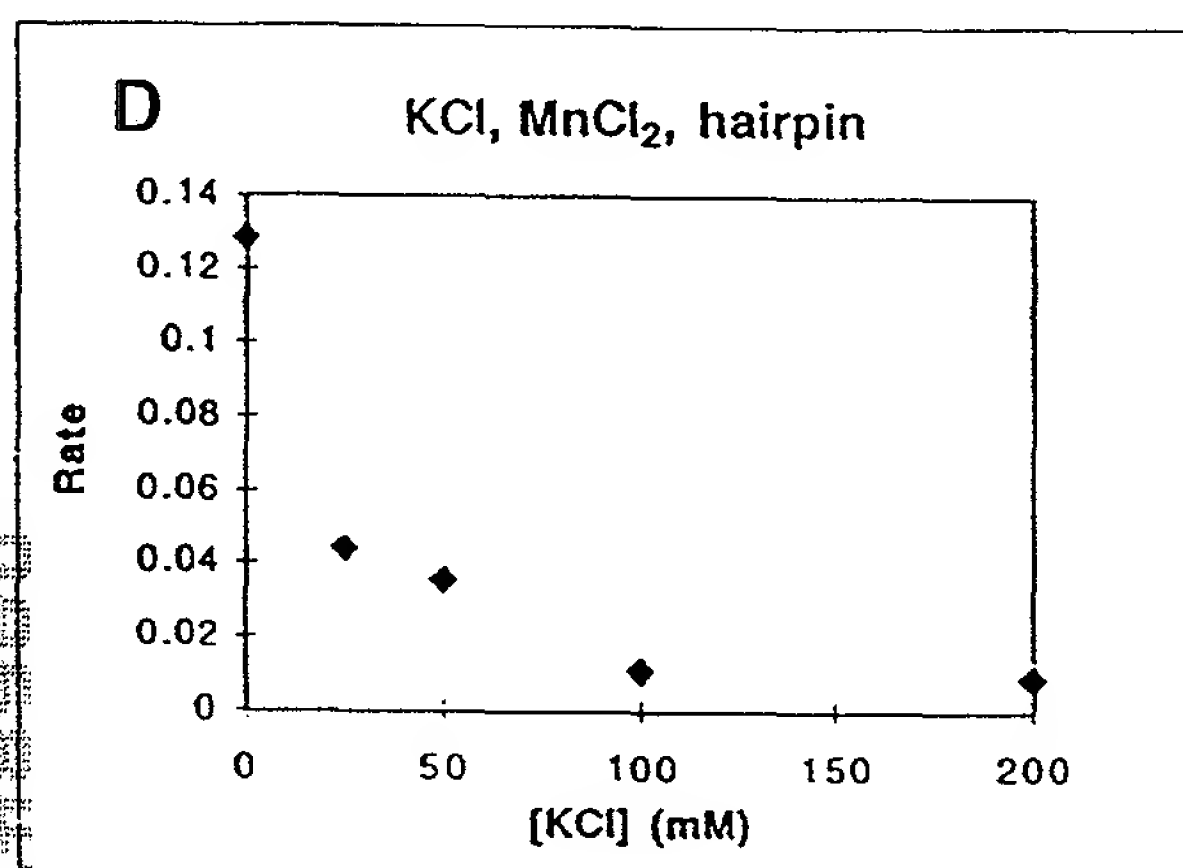
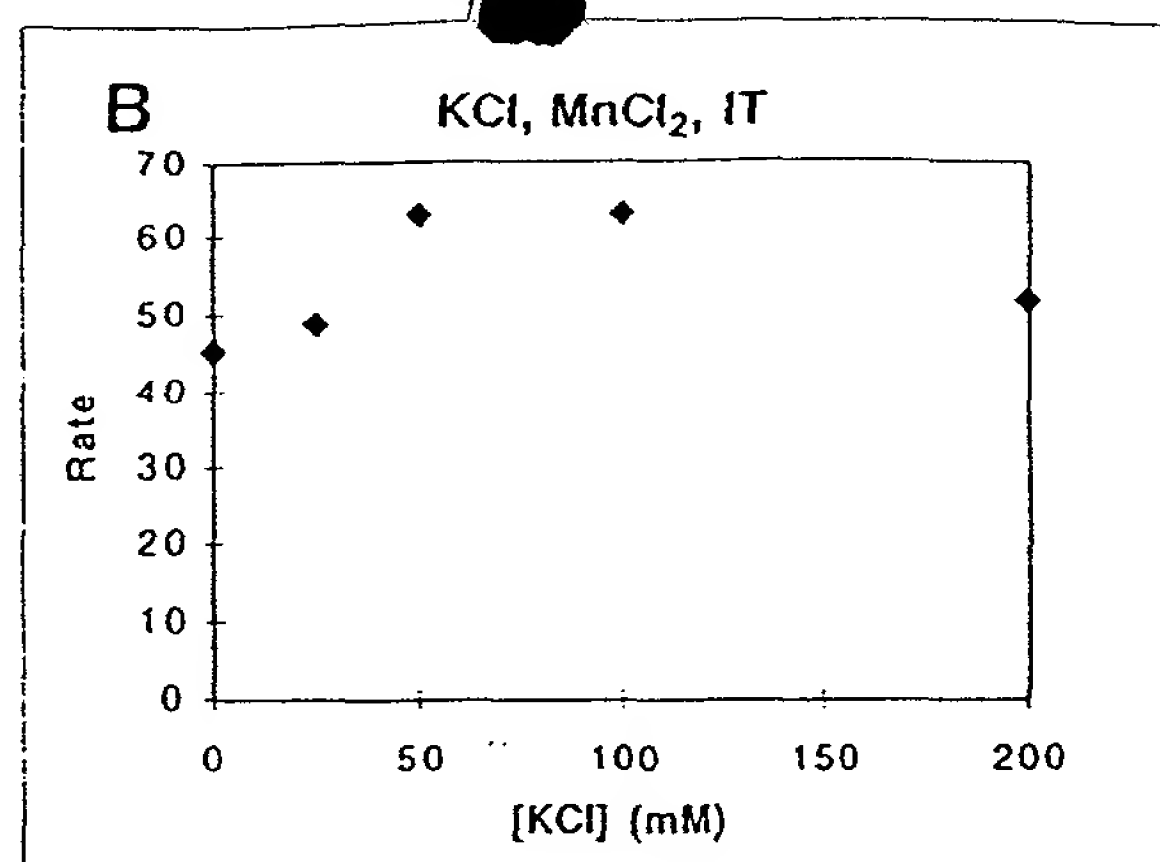
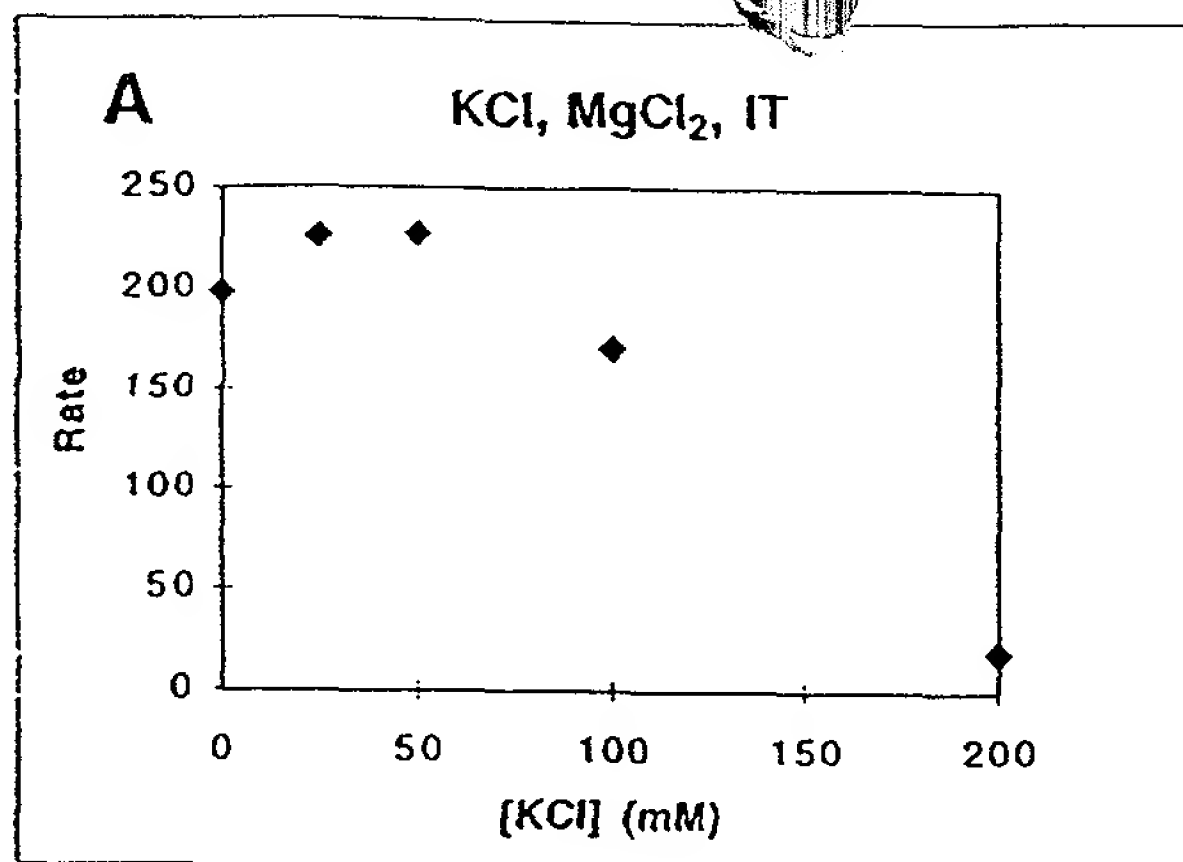
119/127

FIGURE 102



120/127

FIGURE 103



121/127

FIGURE 104

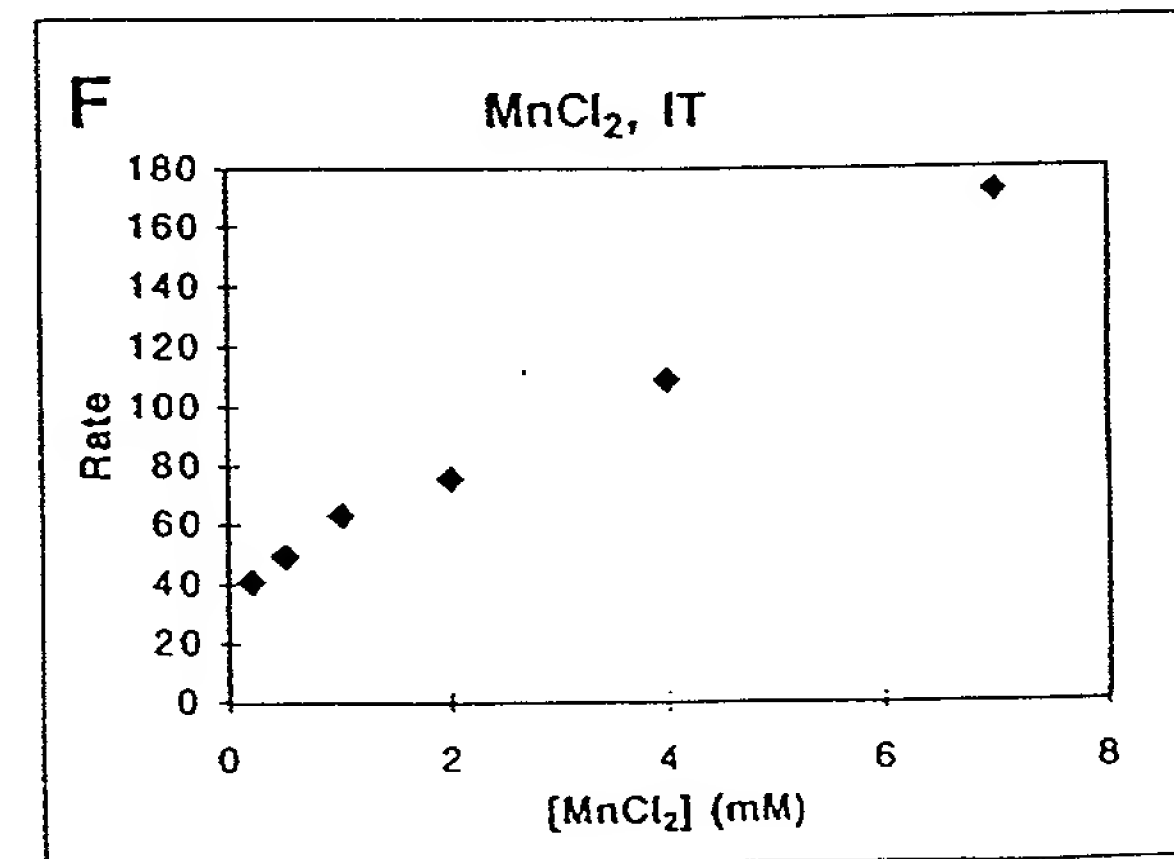
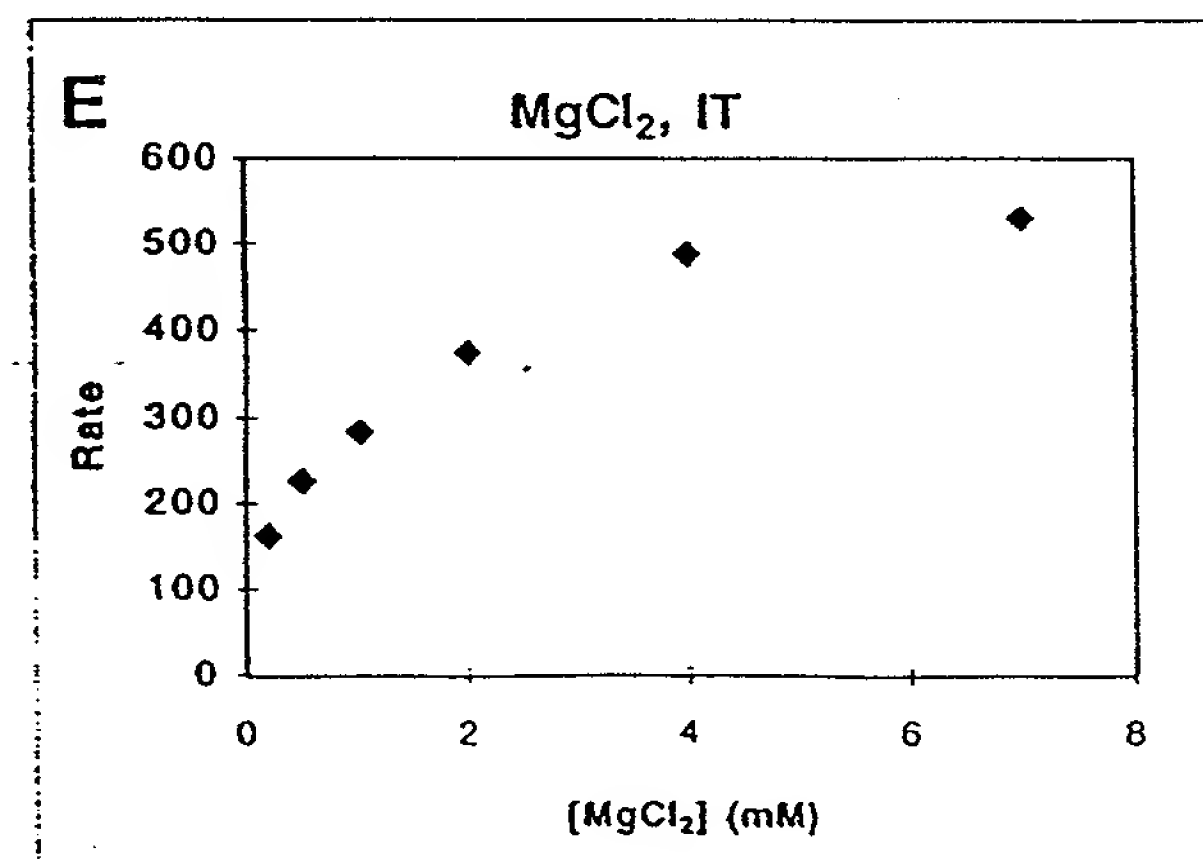
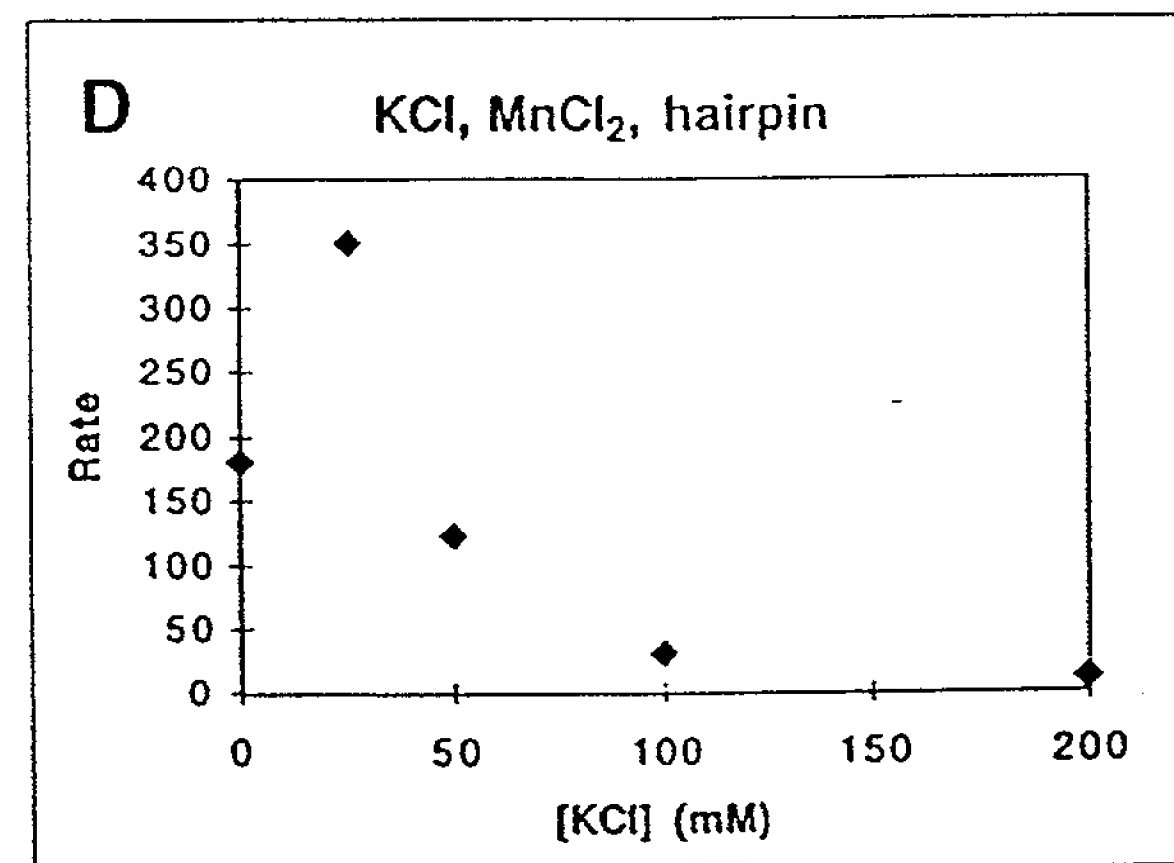
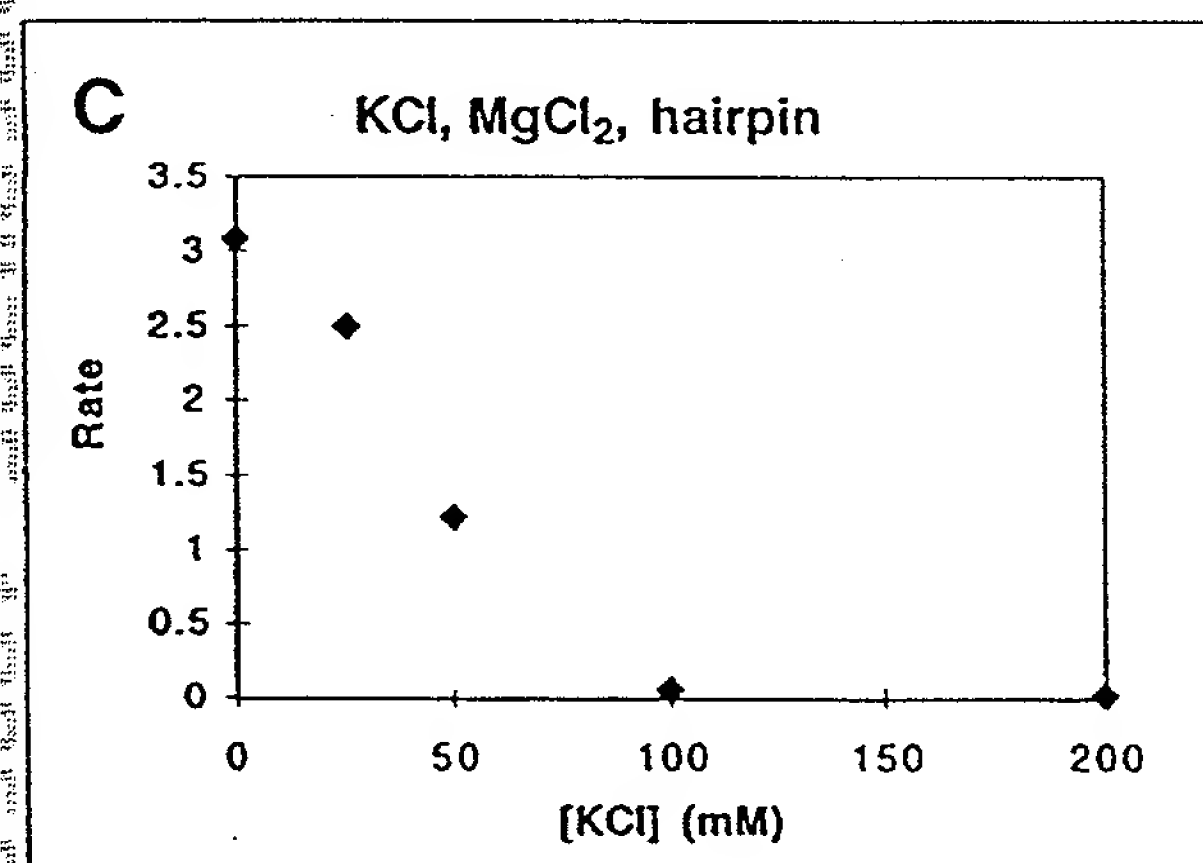
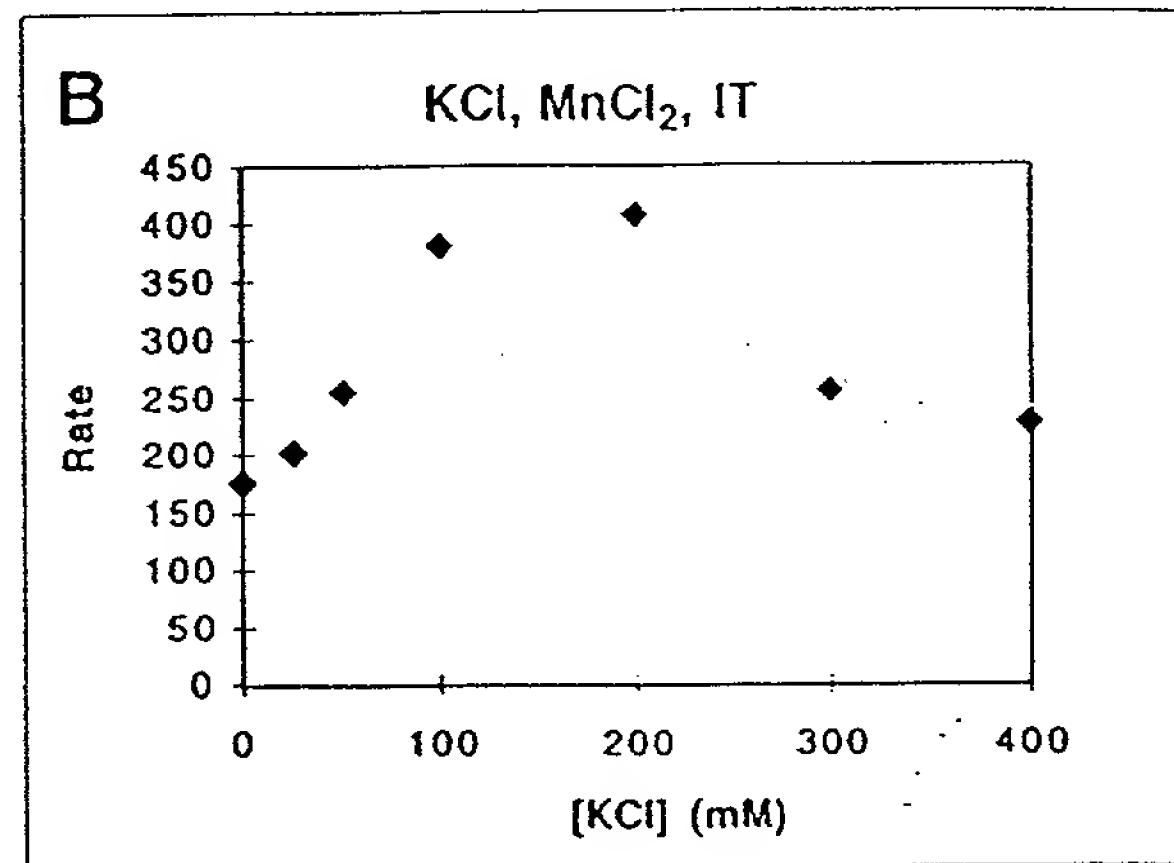
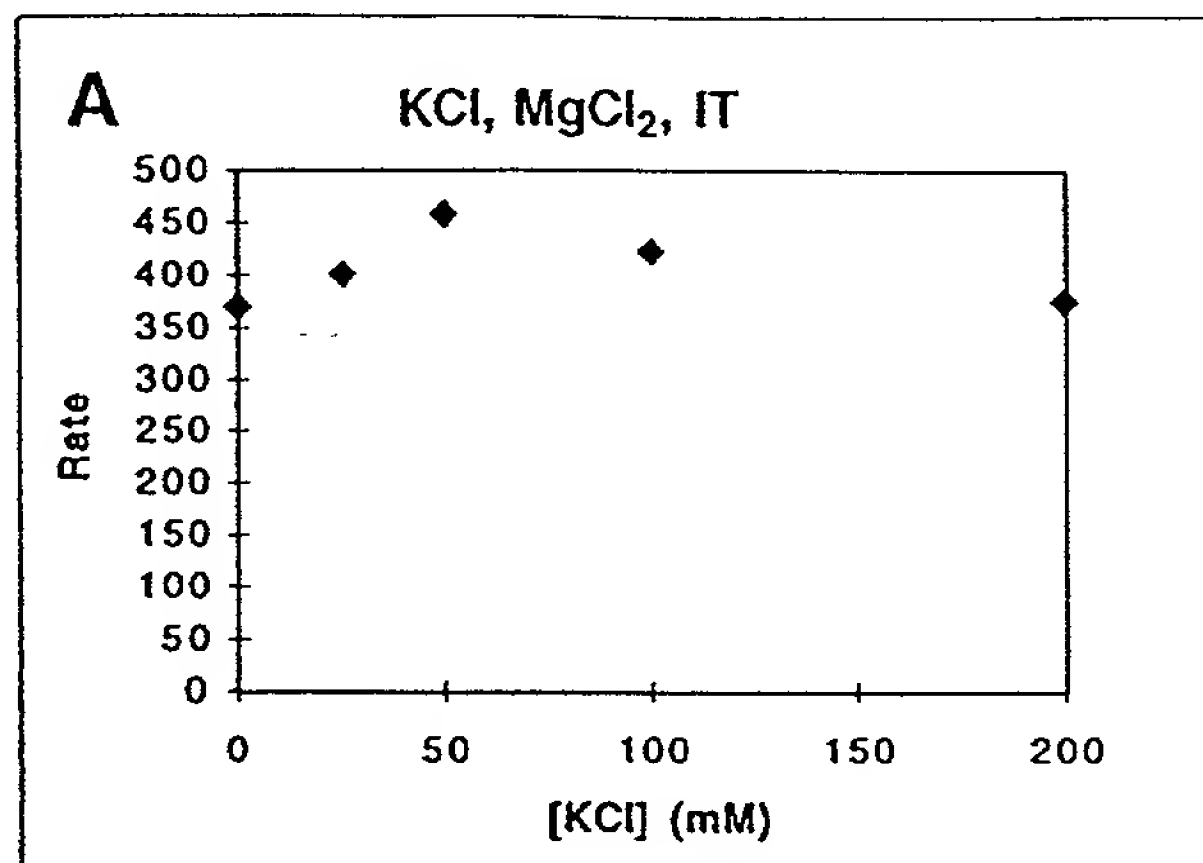


FIGURE 104 (cont.)

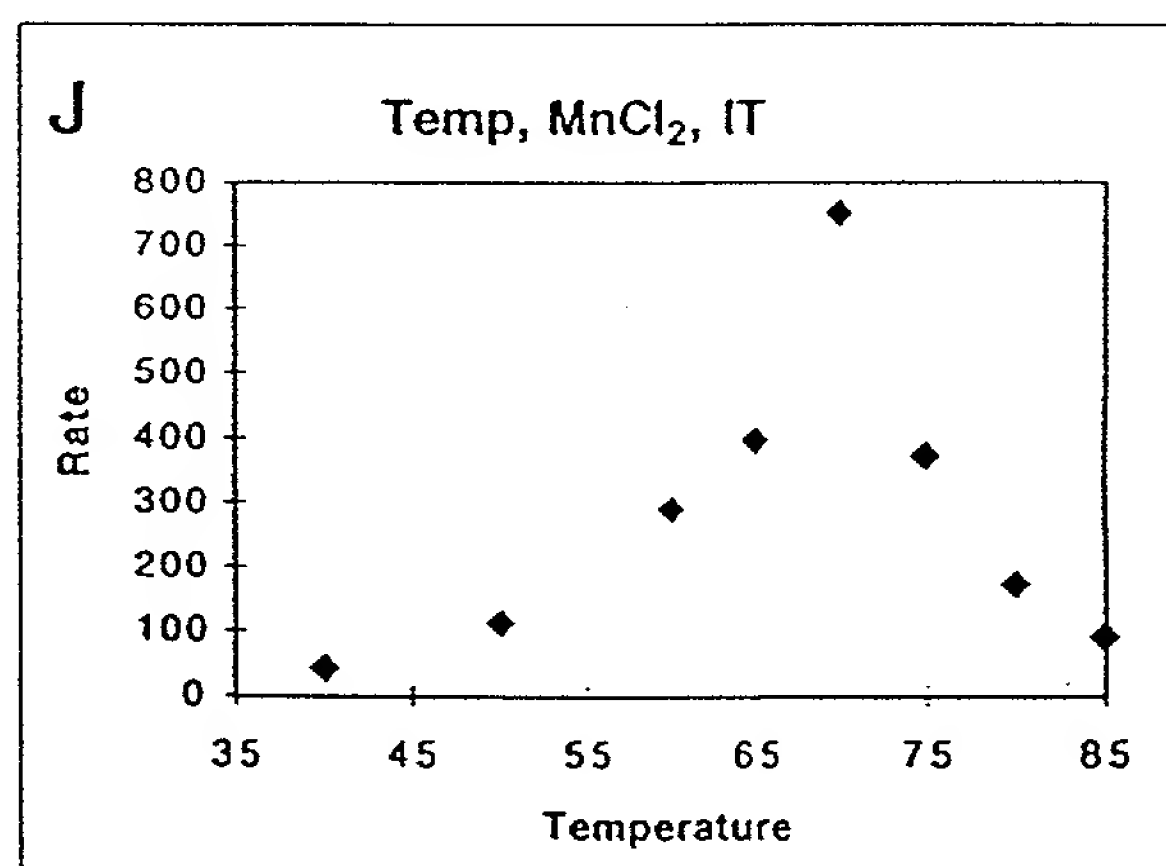
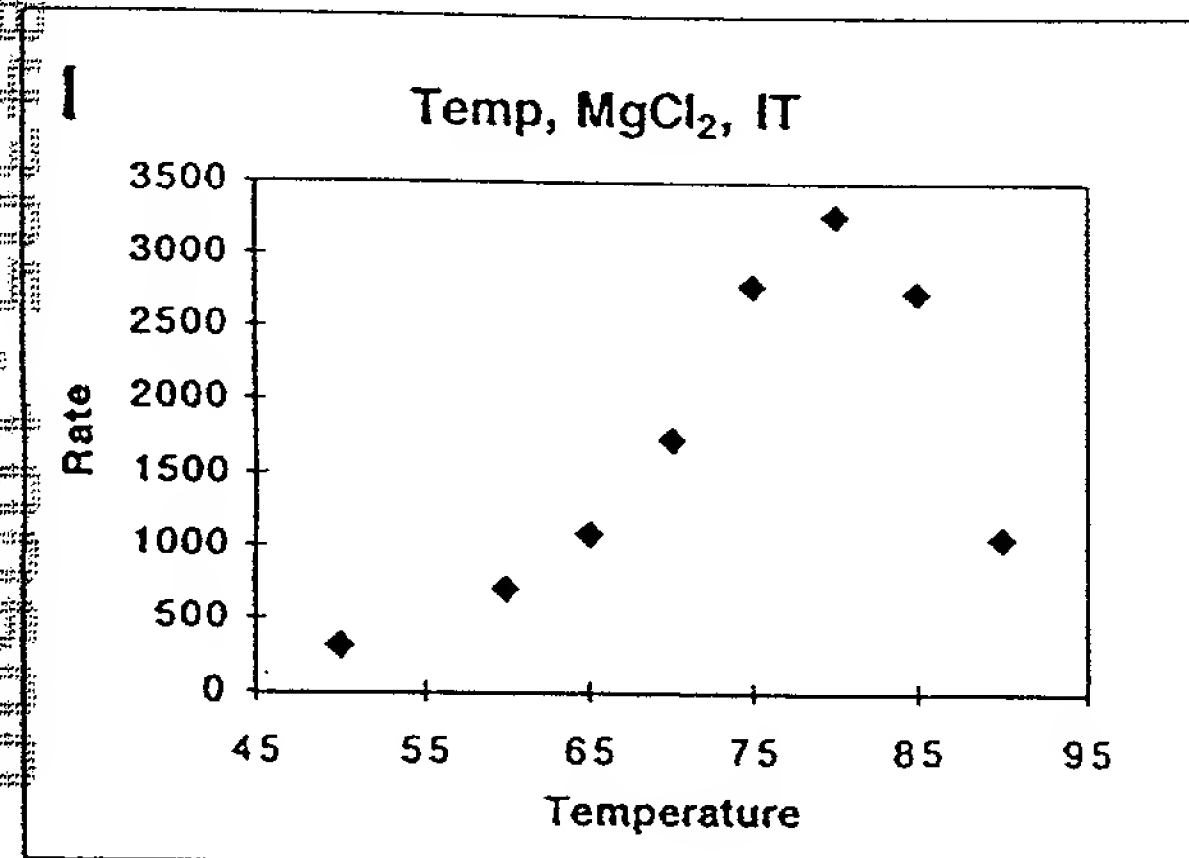
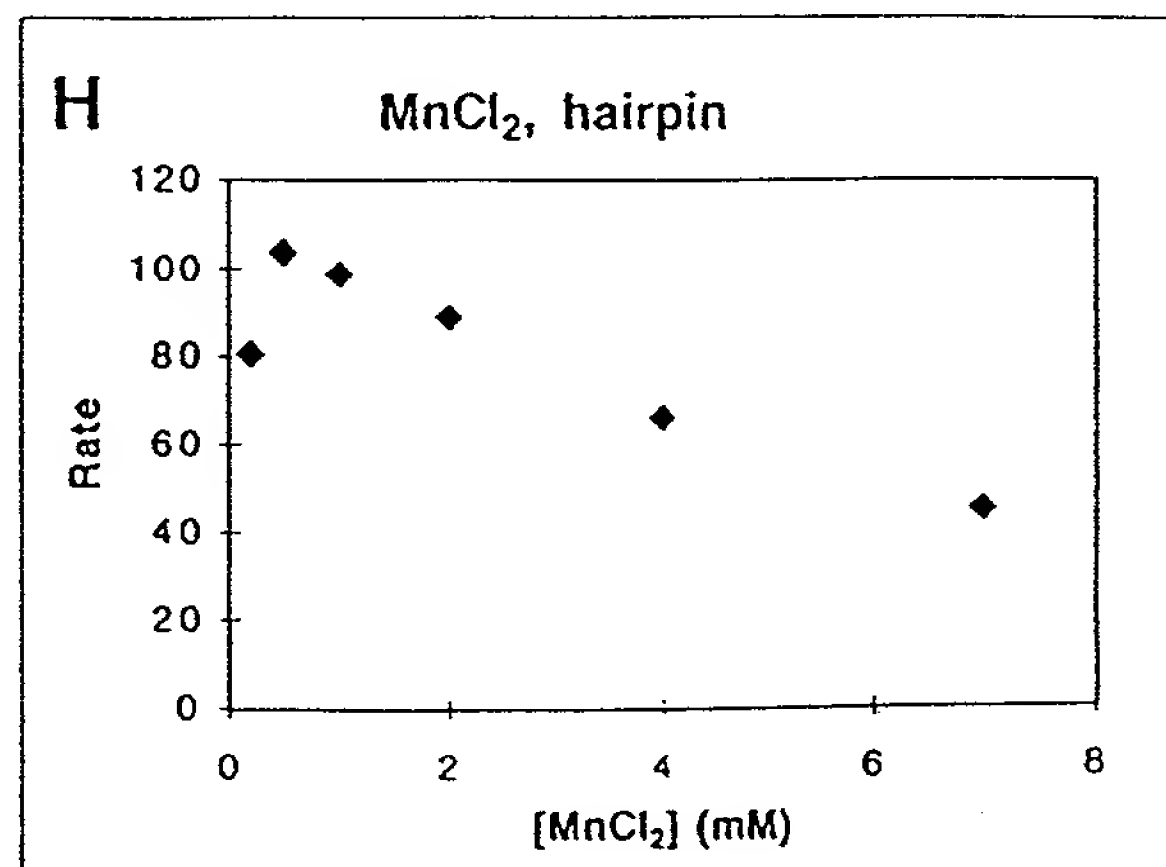
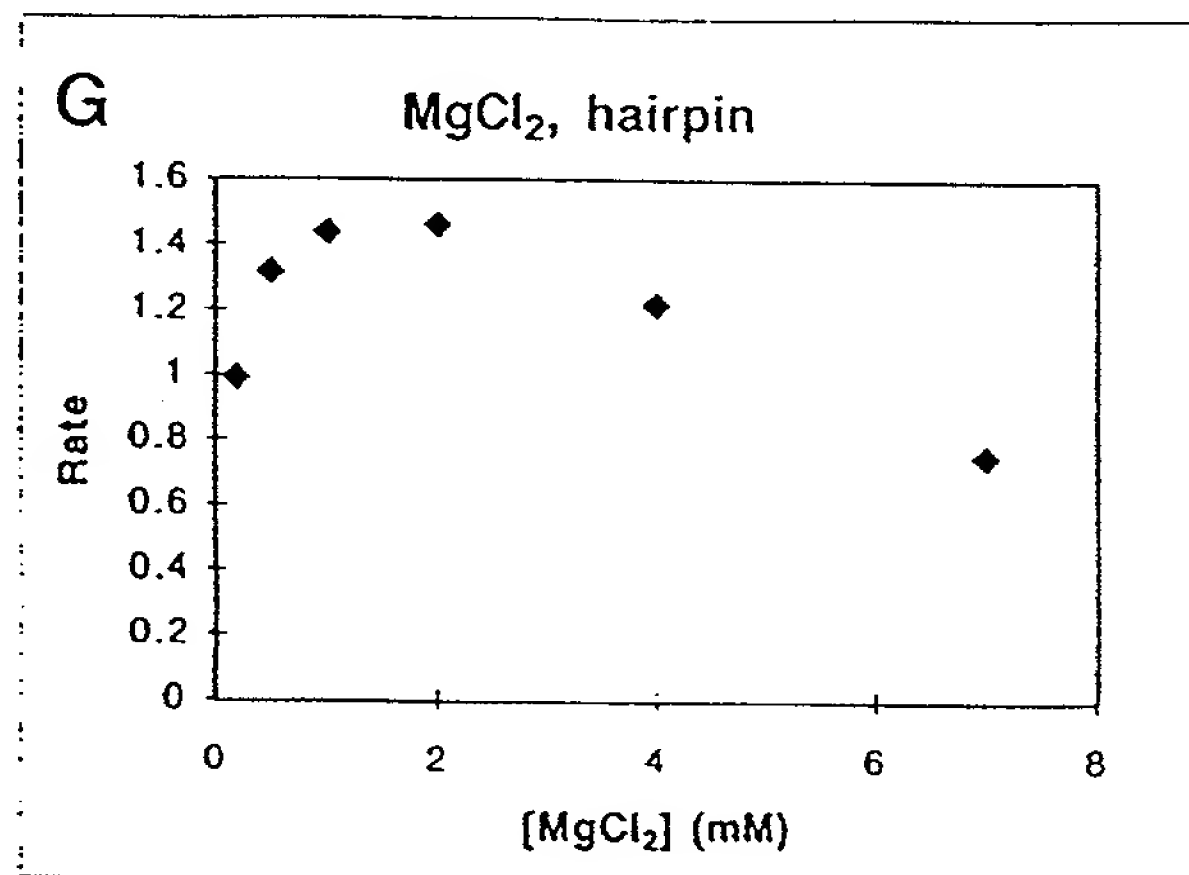


FIGURE 105

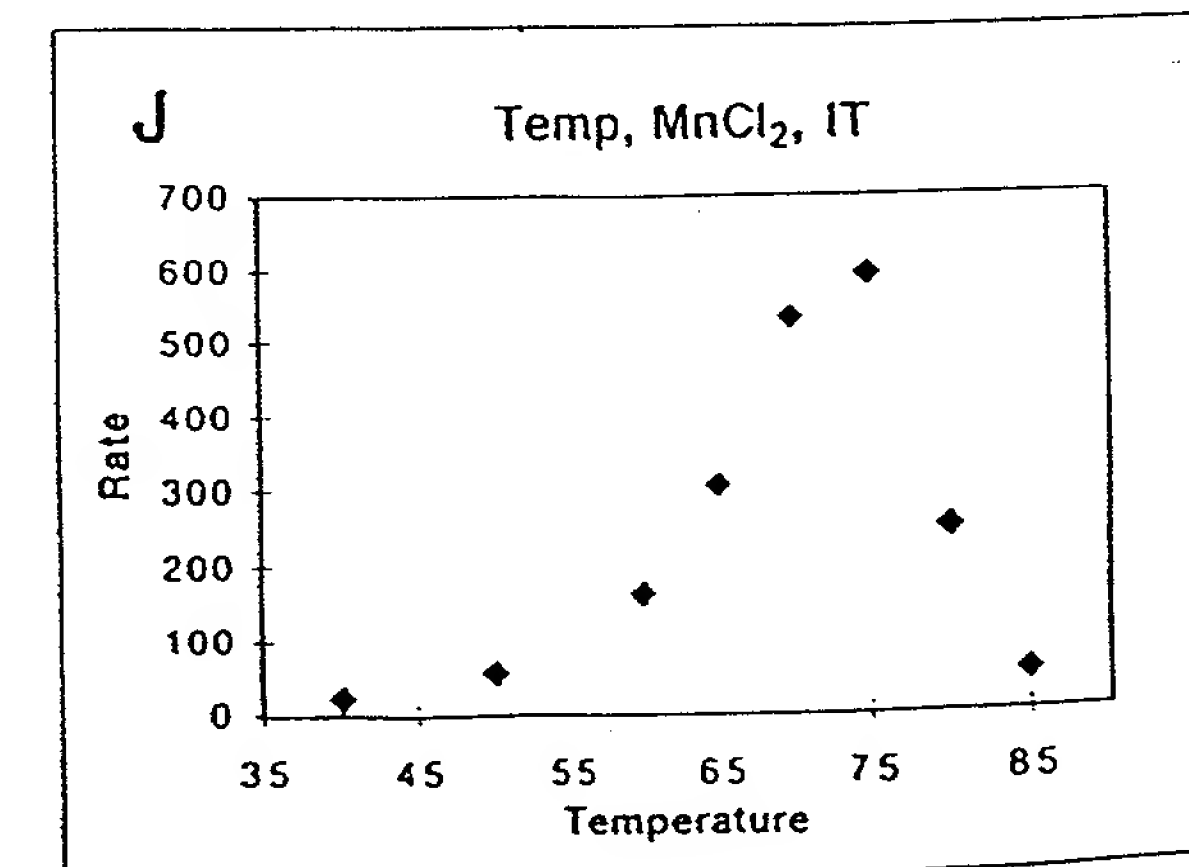
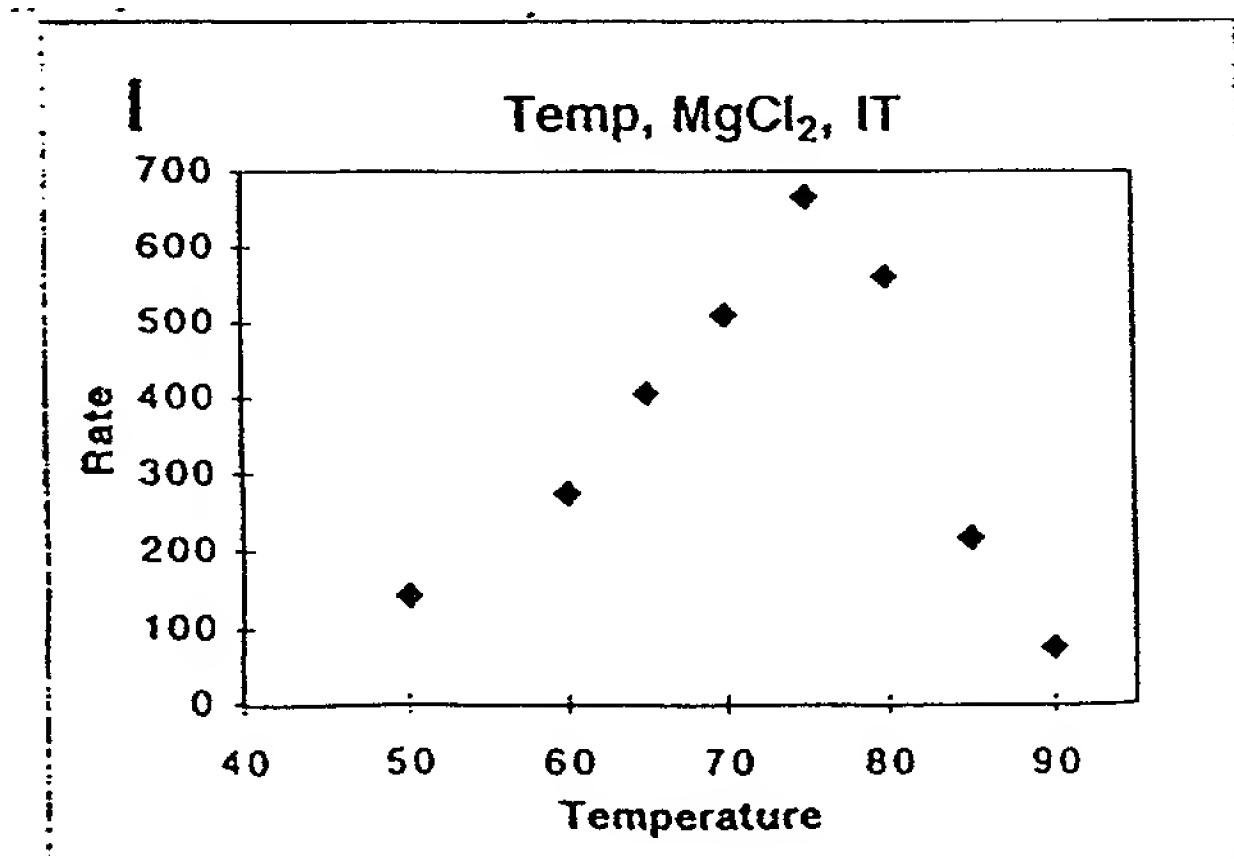
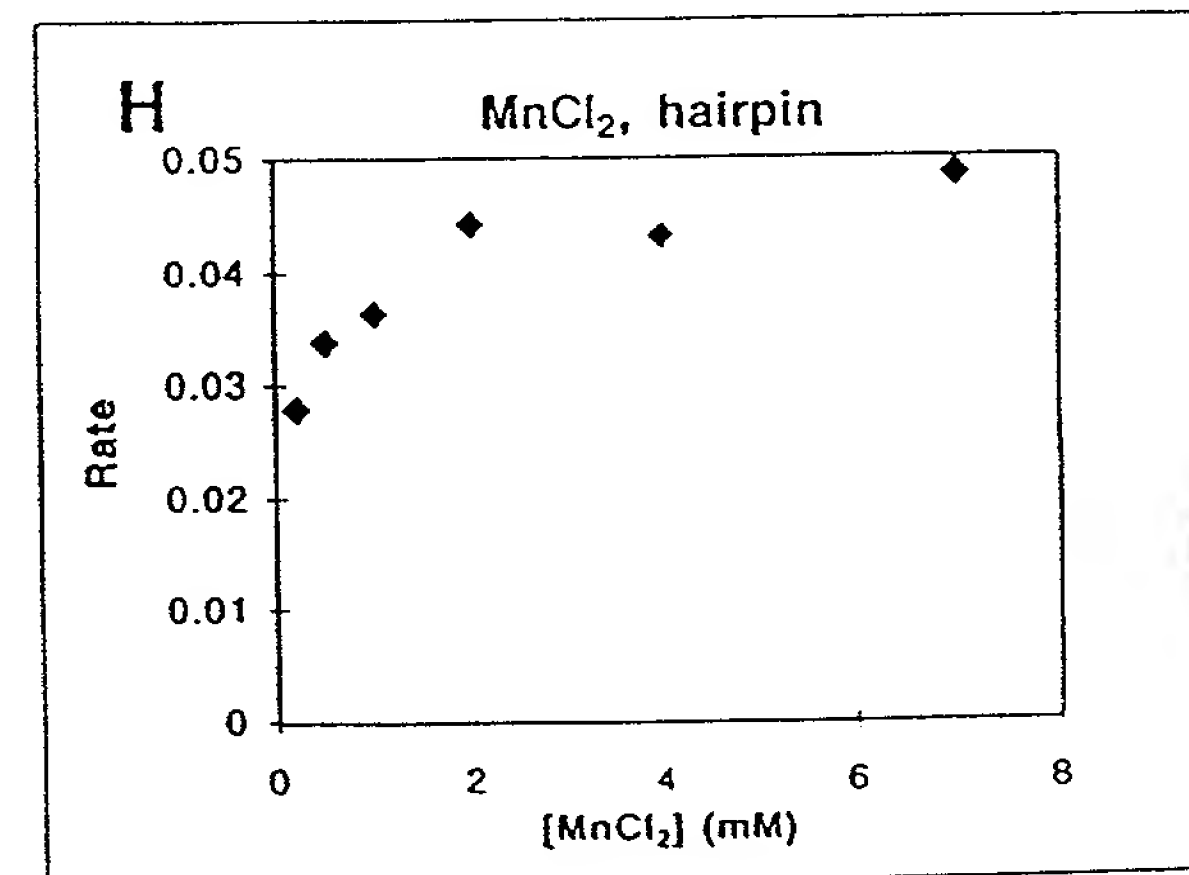
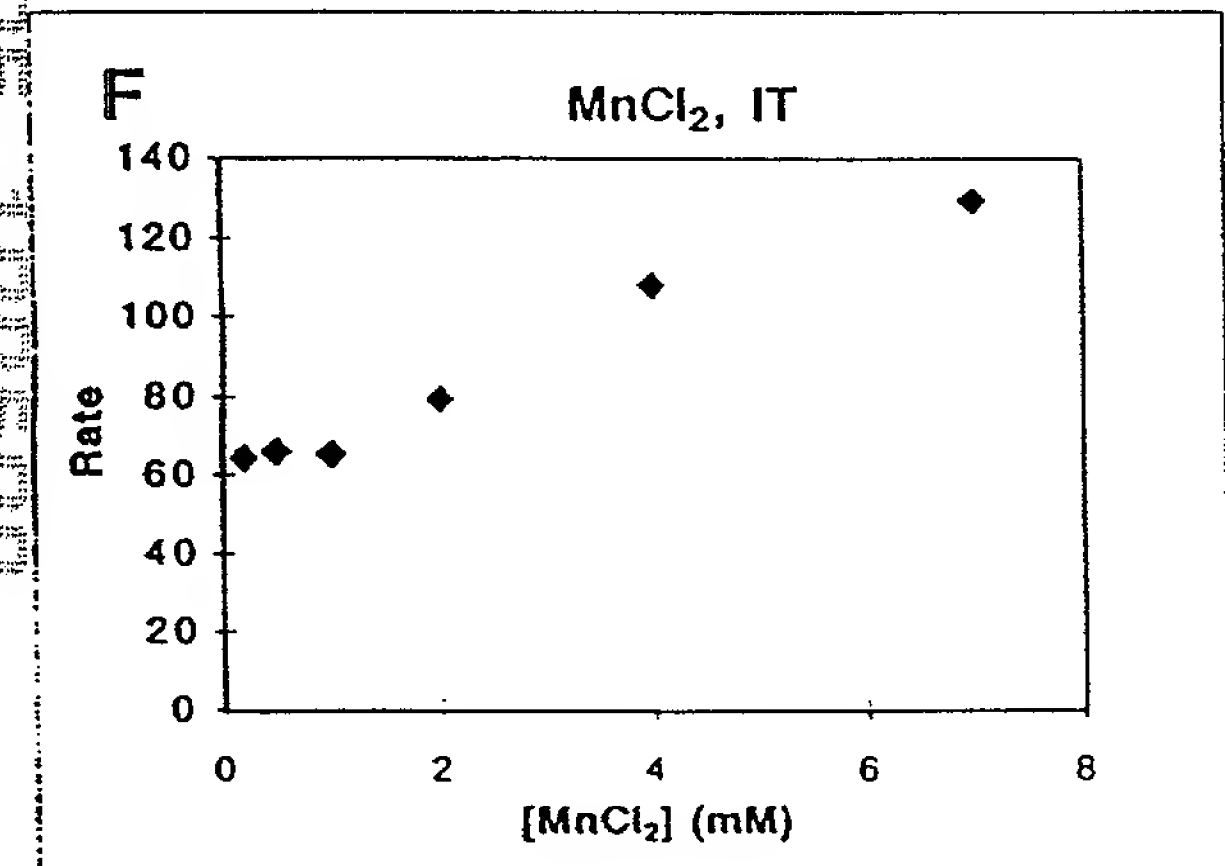
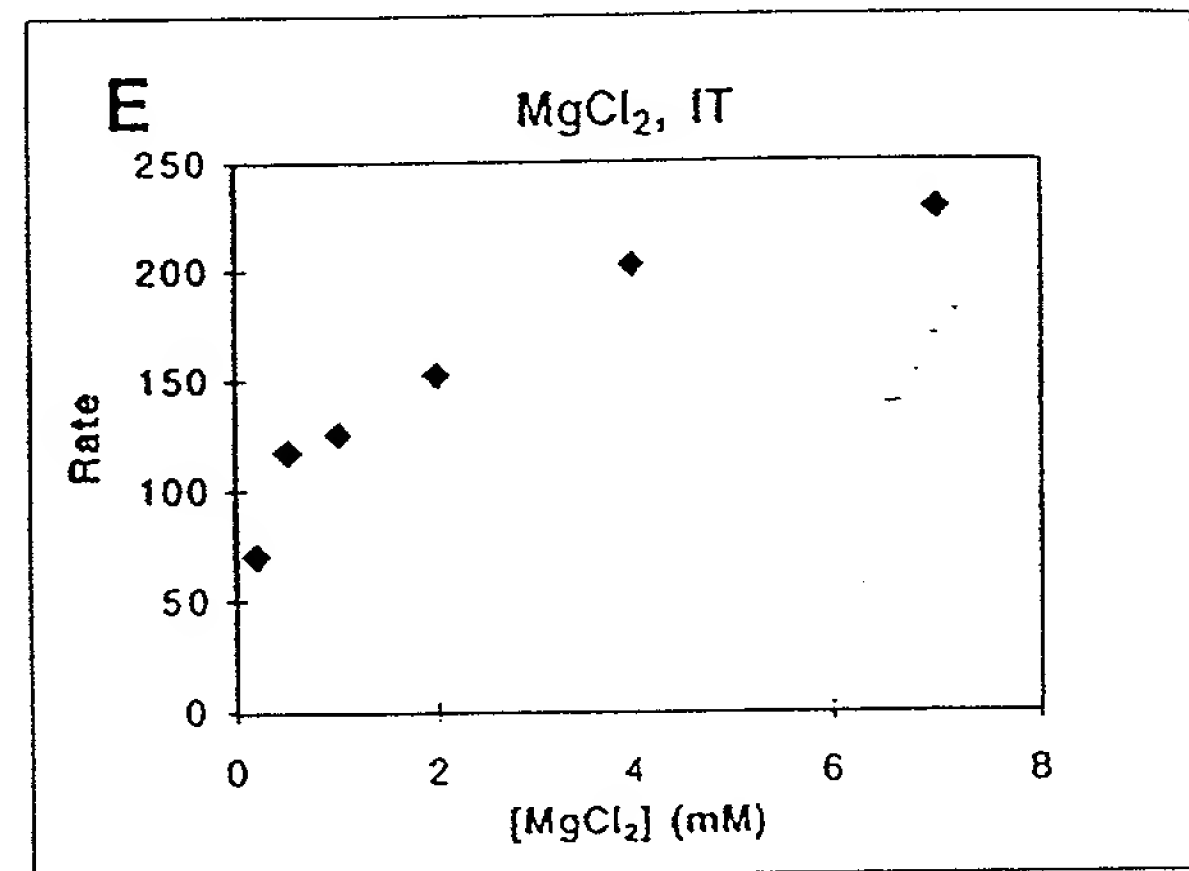
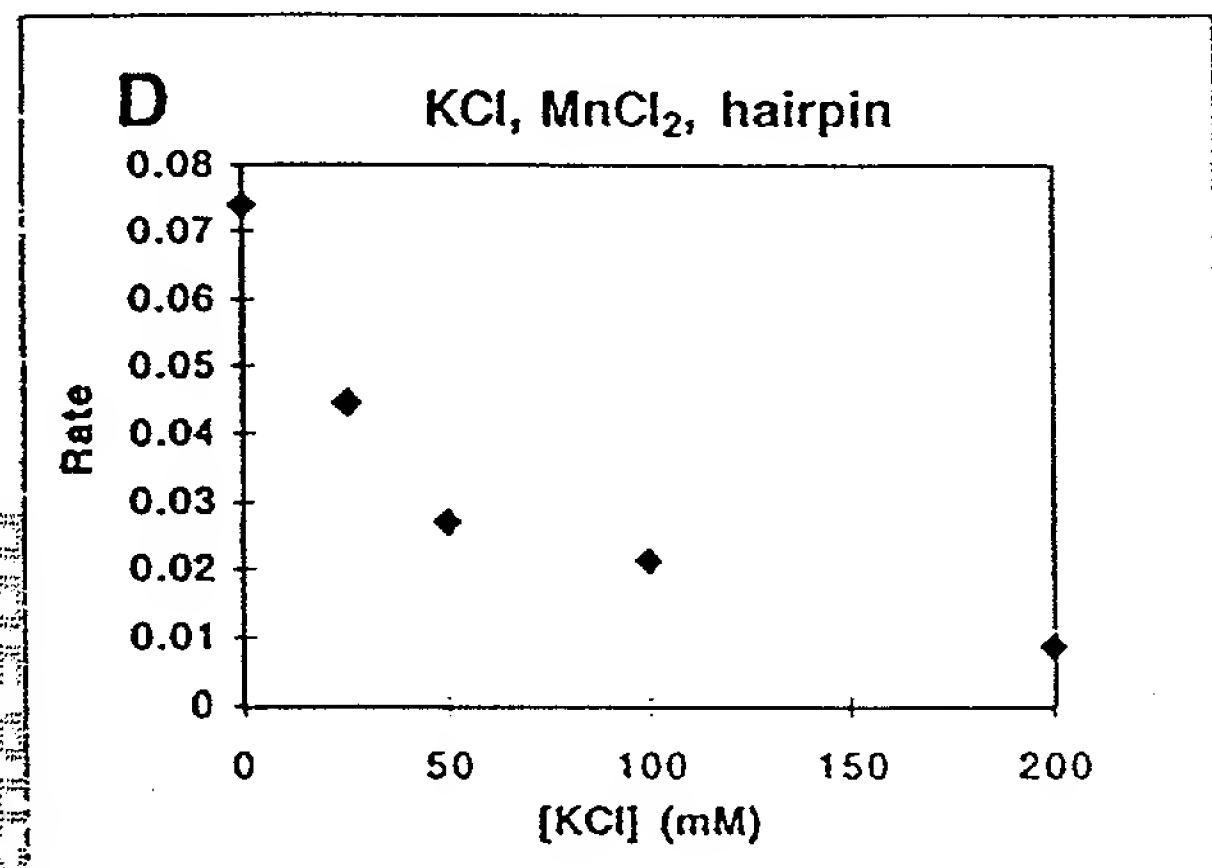
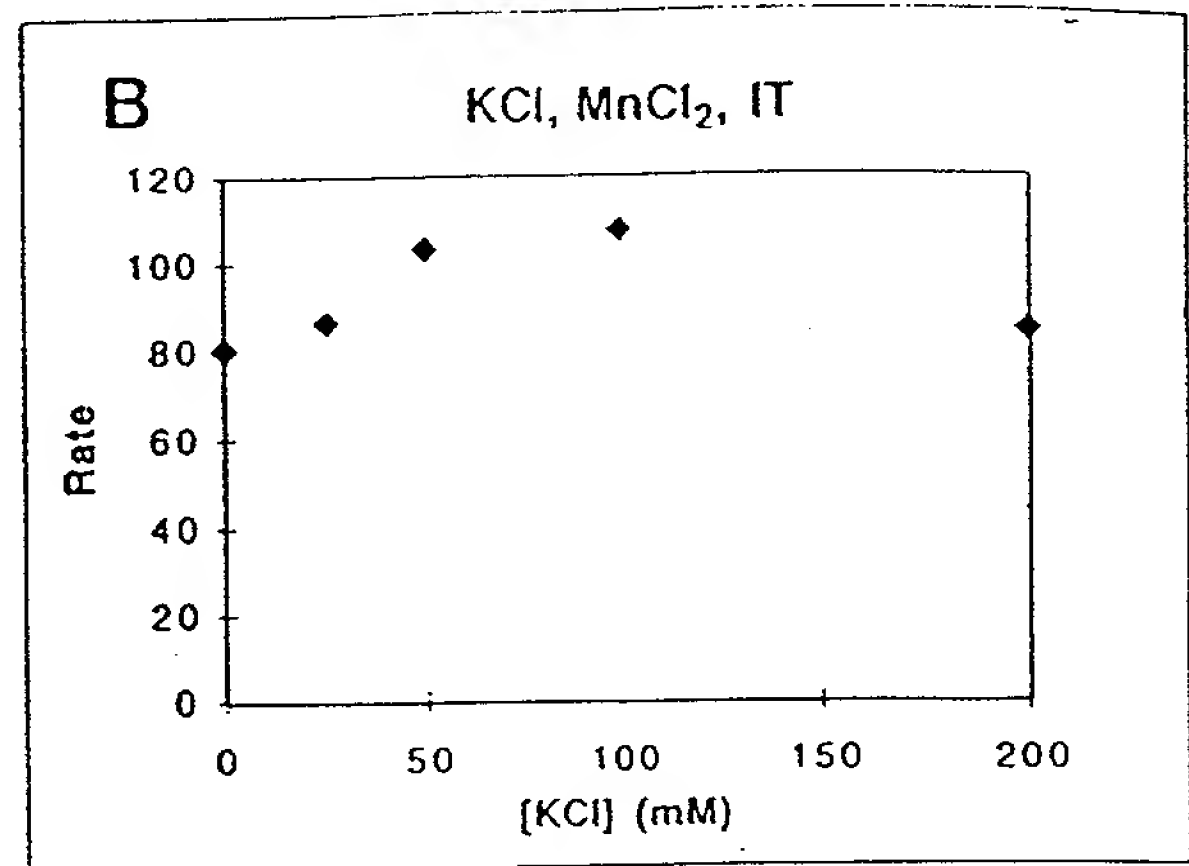
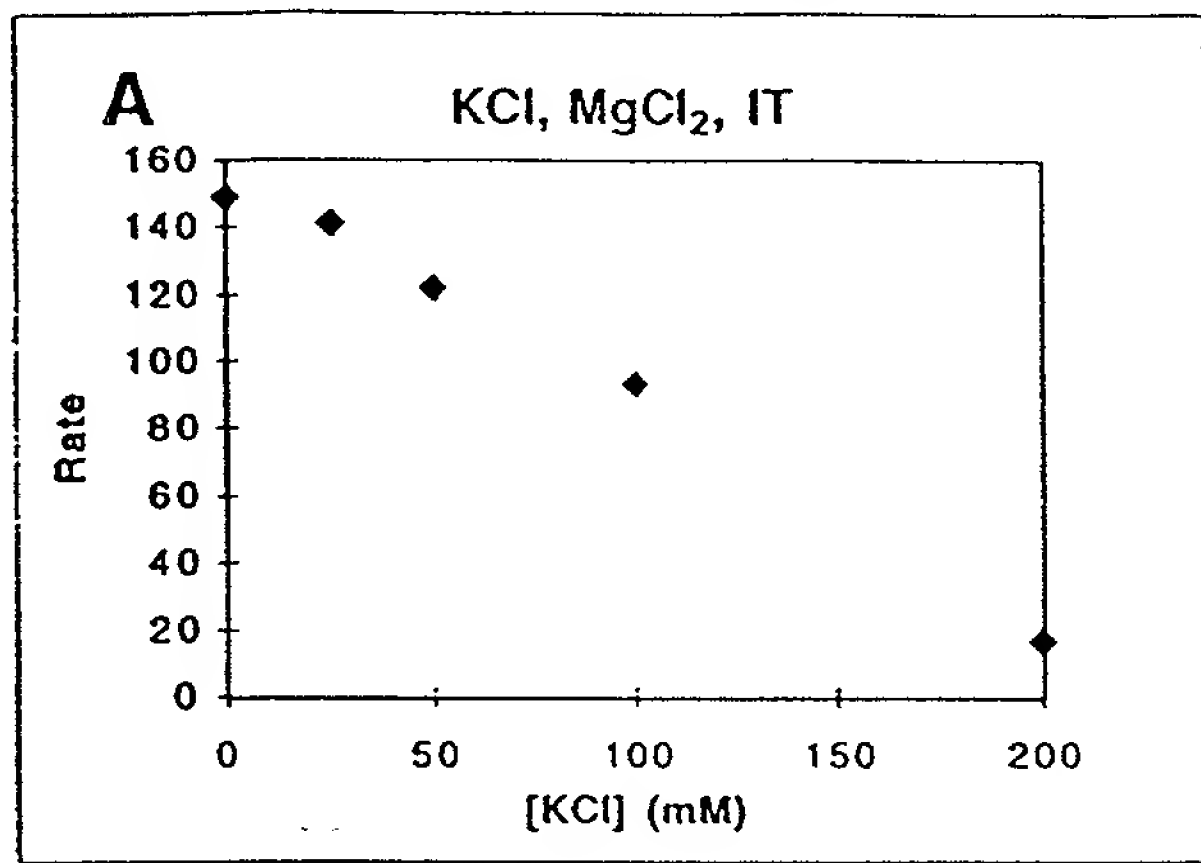


FIGURE 106

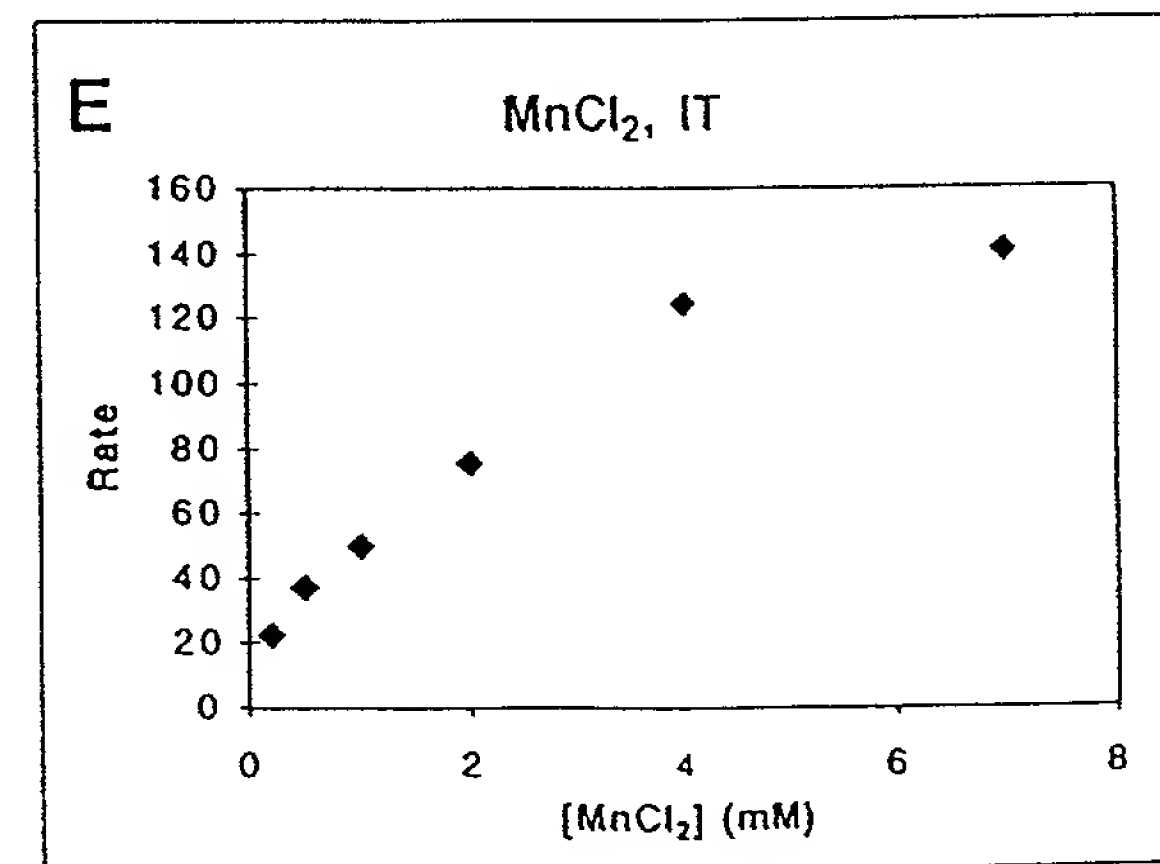
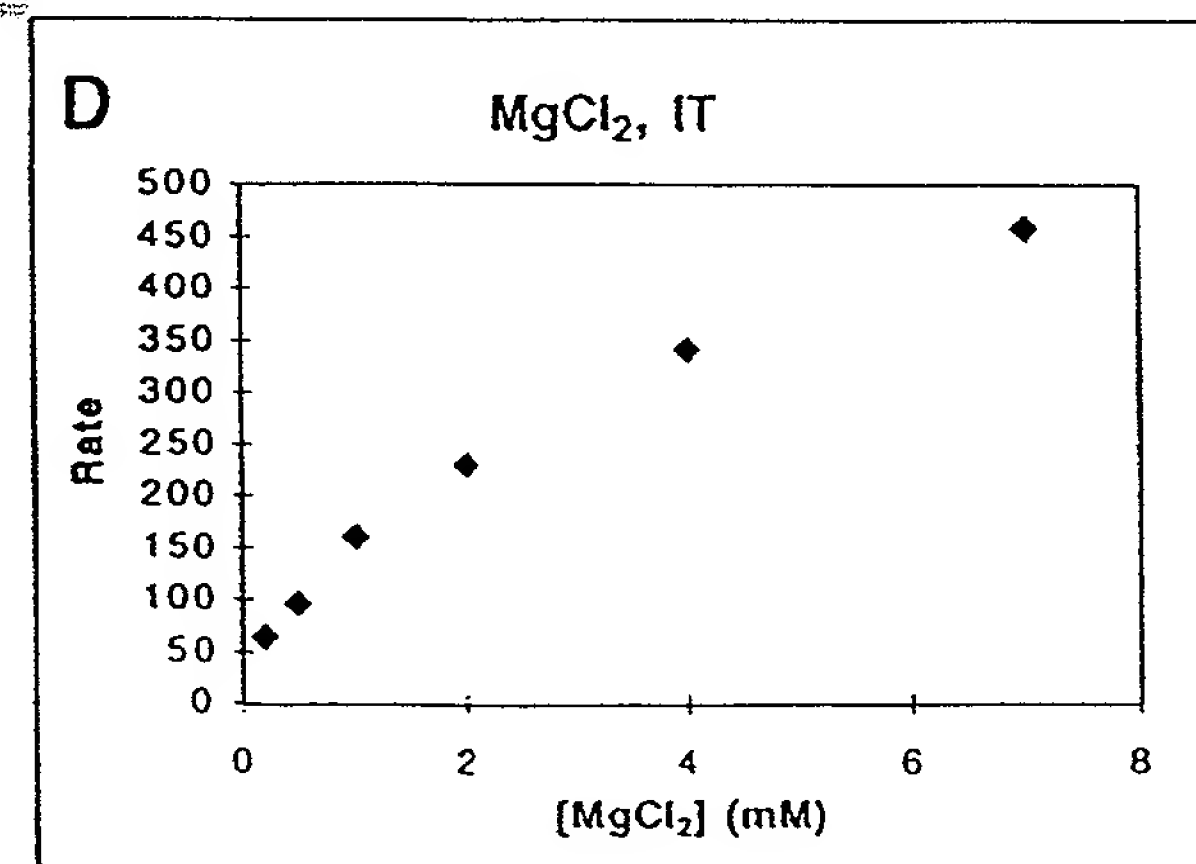
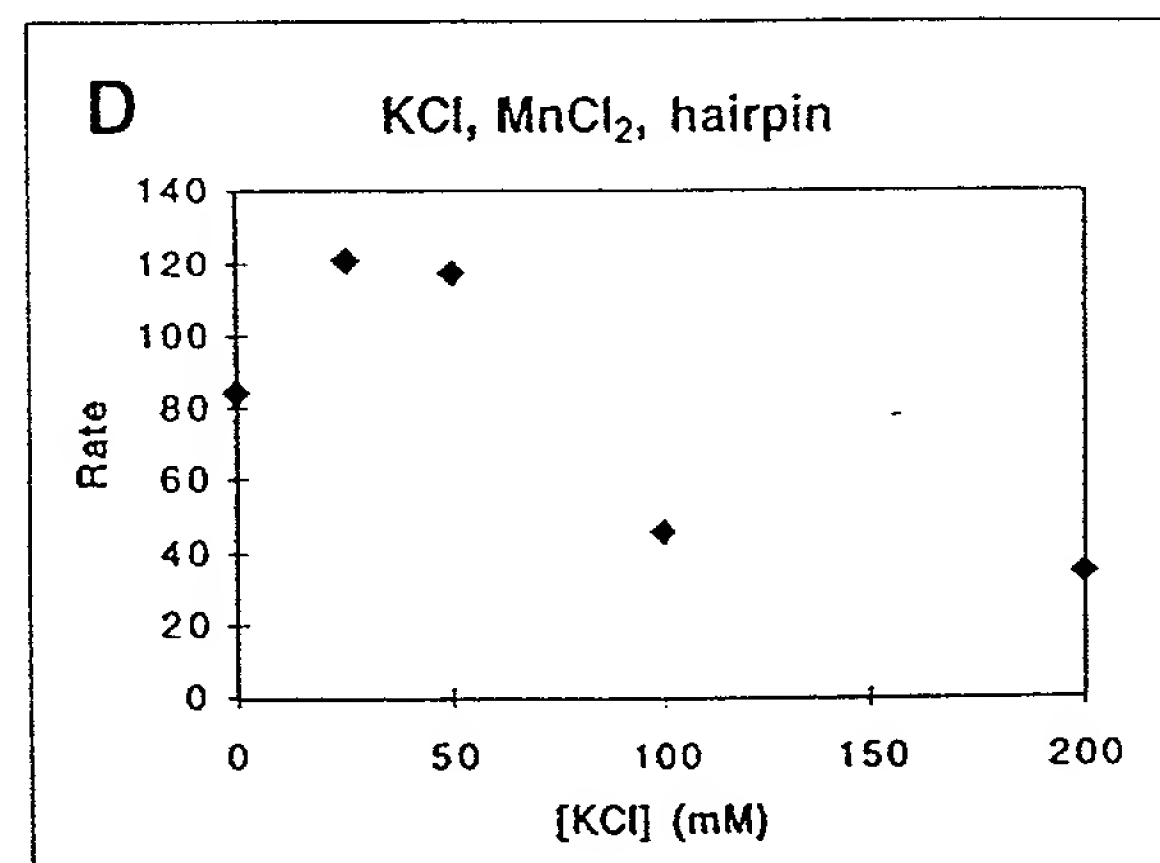
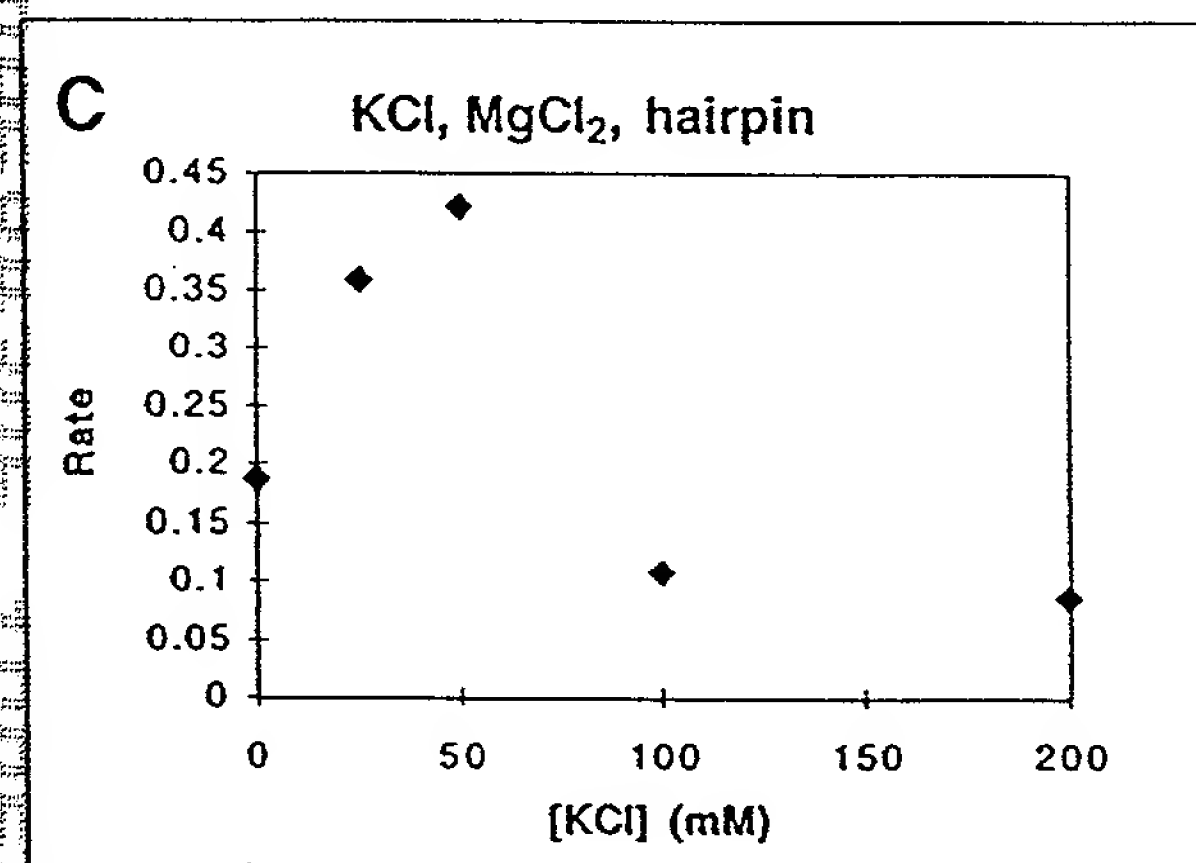
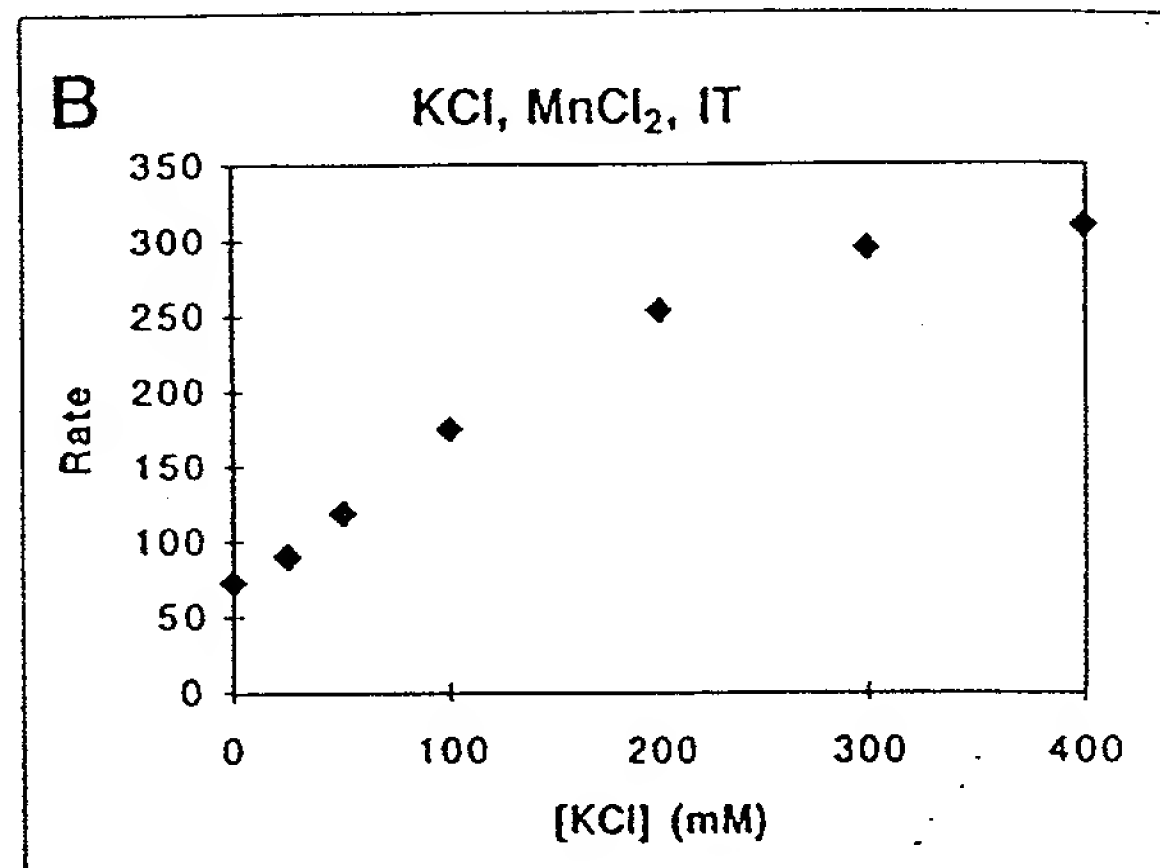
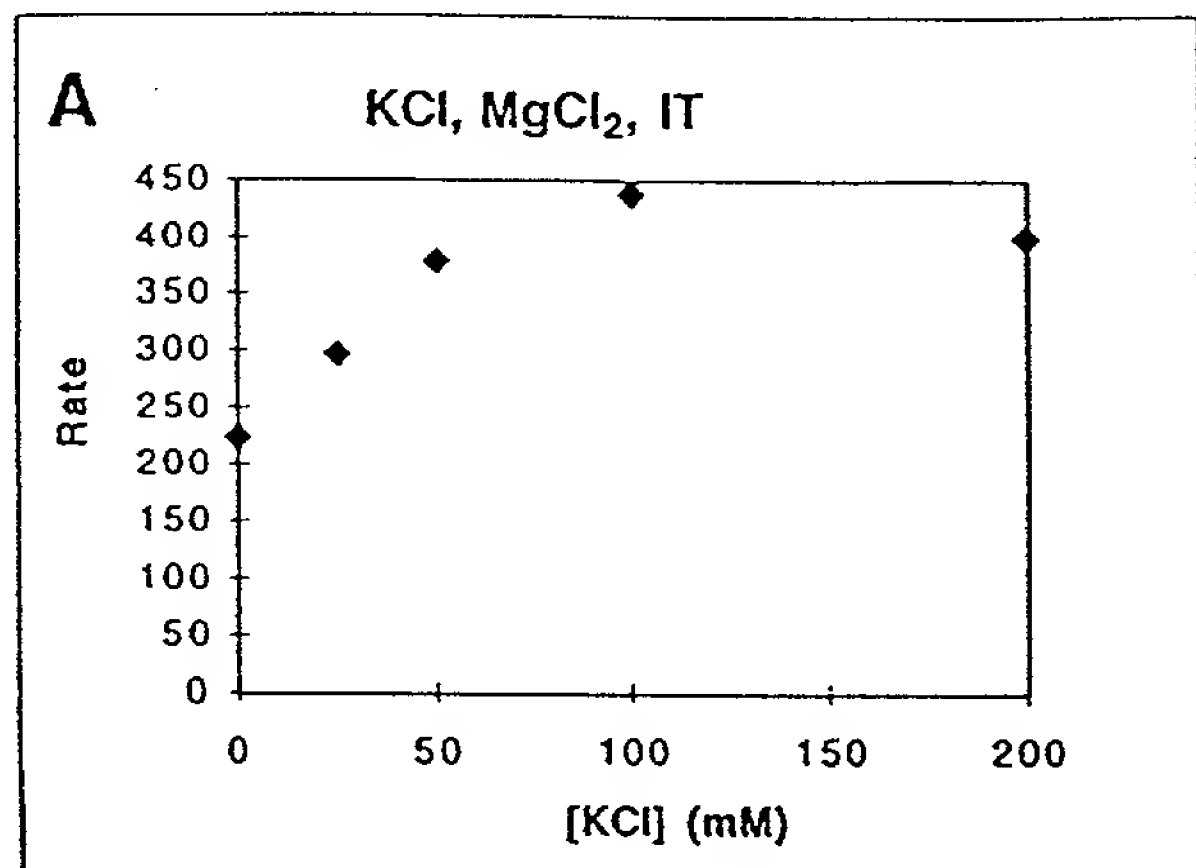


FIGURE 106 (cont.)

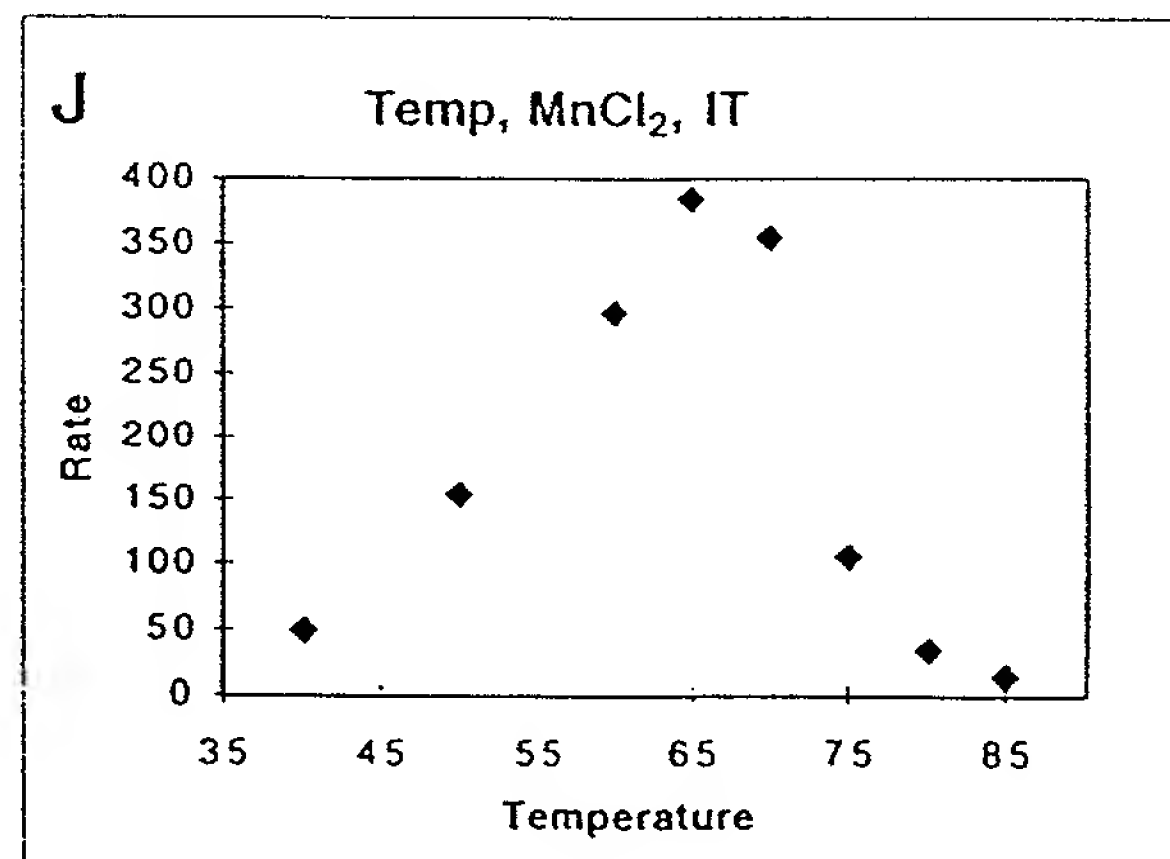
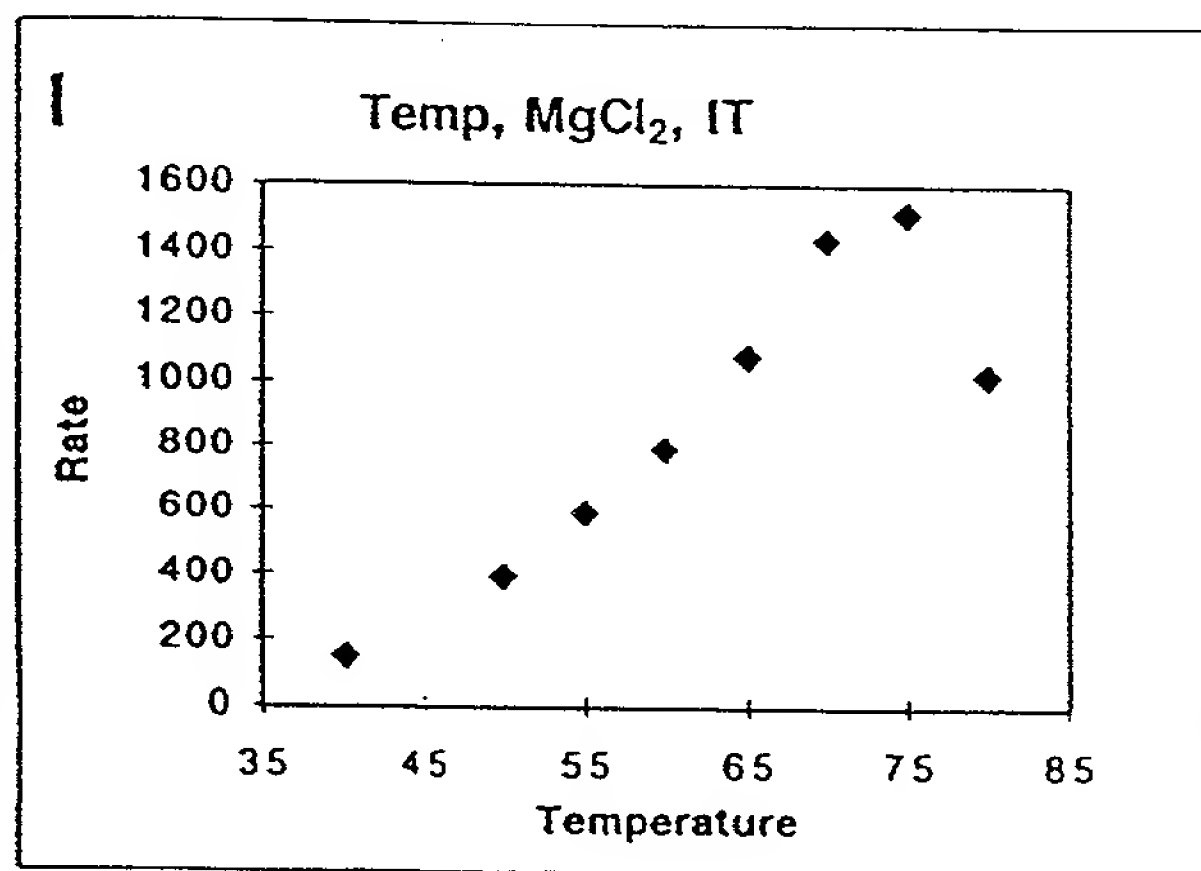
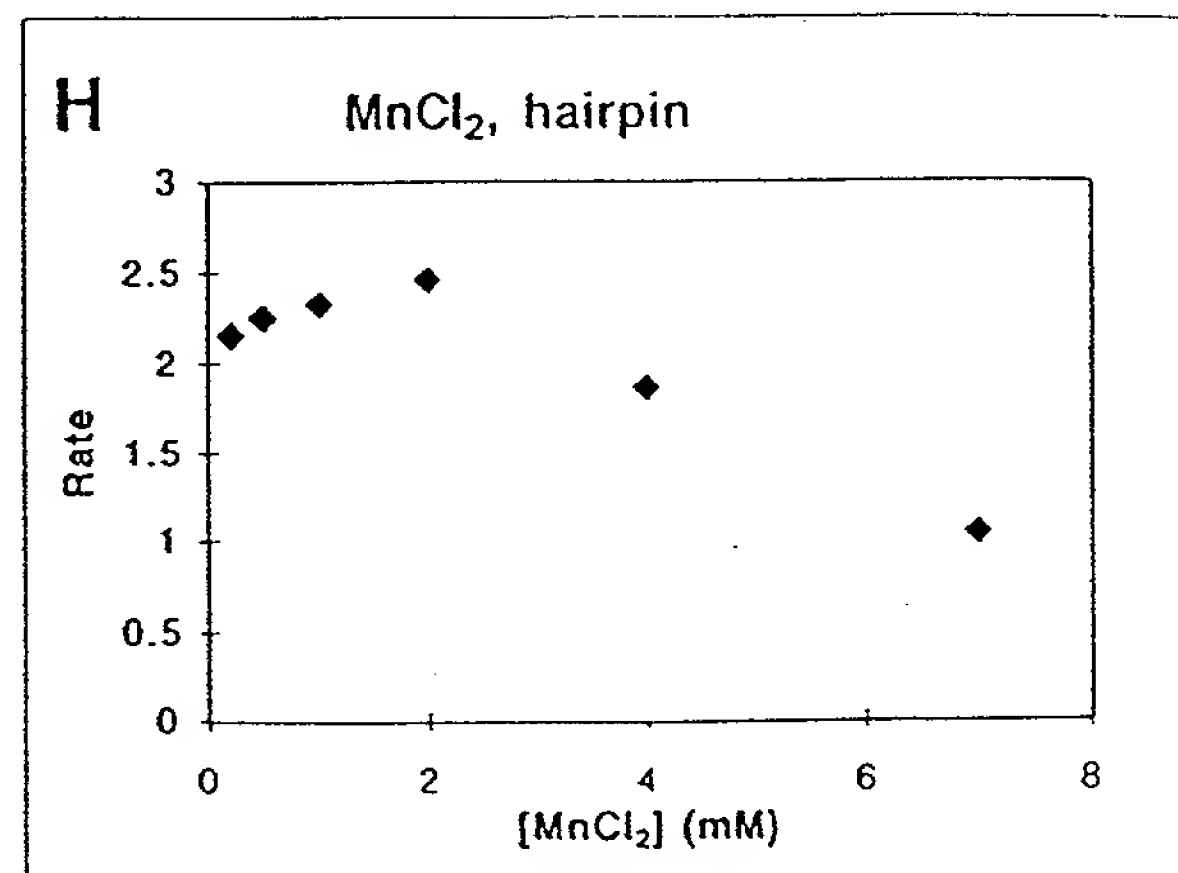
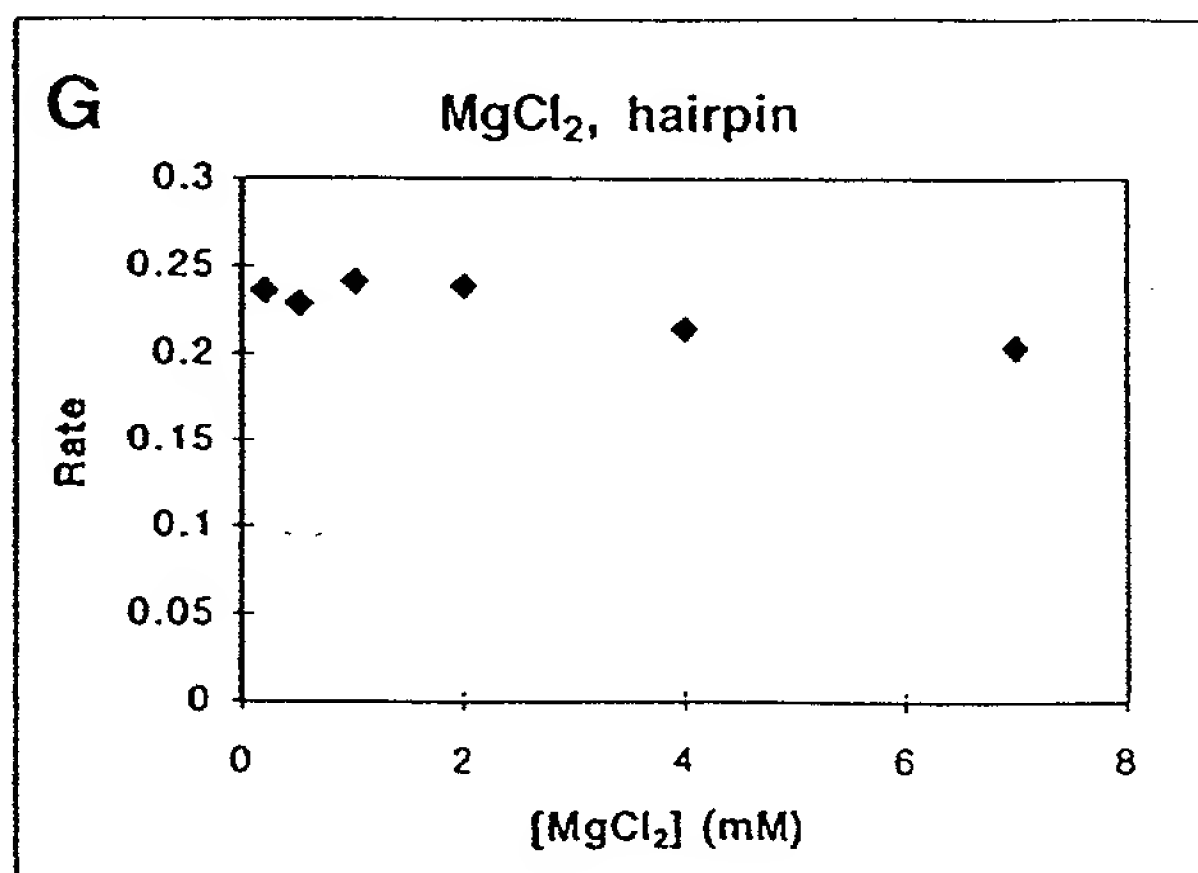
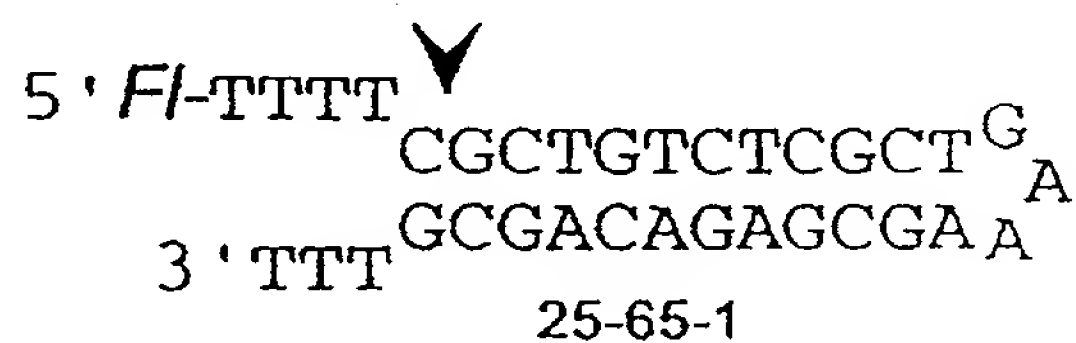


FIGURE 107

Hairpin Substrate

A)



B)

Invader (IT) substrate

